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AMERICAN VETERINARY MEDICAL ASSOCIATION

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Volume CXI **NOVEMBER 1947** *Number 848*


THE PRESIDENT'S SCIENTIFIC RESEARCH BOARD
OMAHA
MEANS WHAT?—IN THE FIELD OF VETERINARY SCIENCE
Quoting John R. Steelman, chairman: "The security and prosperity of the United States depends today, as never before, upon the rapid extension of scientific knowledge. So important has this extension become in our country that it may reasonably be said to be the major factor in national survival."
In the field of veterinary science, there is but to add that animal production is the frontier of human survival and that the practice of veterinary medicine is a deciding agency in a livestock country where the population can outstrip its agricultural potential and food supply.
THERE IS MORE THAN MEETS THE EYE IN PROTESTING AGAINST THE MISUSE OF VETERINARY SCIENCE IN THE REGIONS OF CONGESTED LIVESTOCK POPULATIONS.
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Symposium on Foot-and-Mouth Disease in Mexico

At the Cincinnati Session of the Association, Aug. 18-21, 1947, the following symposium was presented at the First General Session. The members of the symposium were Dr. Fernando Camargo, Mexico City, D.F.; Dr. M. S. Shahan, Washington, D. C.; and The Hon. George W. Gillie, Washington, D. C. As Dr. Shahan was unable to attend on account of his duties in Mexico, Dr. M. R. Clarkson of Washington, D. C., took his place on the program.

Brief Report on the Diagnosis of Foot-and-Mouth Disease in Mexico

FERNANDO CAMARGO, D.V.M.
Mexico, D.F.

Early in December of 1946, we received a commission from the Ministry of Agriculture to arrange for diagnosis of a disease that had appeared in the cattle of the east central region of Mexico.

In order to establish such diagnosis, we went to the state of Veracruz where we inspected first the region of Jalapa and Coatepec, and then we moved to the areas close to the Port of Veracruz. We found that, essentially, the cattle there suffered from stomatitis in different stages of evolution, and that several species of animals were affected, making it necessary to establish a differential diagnosis using experimental laboratory animals for inoculation.

After some inoculations had been made in horses, hogs, and guinea pigs, a presumptive diagnosis was established and

Dr. Camargo is Bacteriologist, Department of Animal Health, National University of Mexico, Mexico, D.F.

—USDA Photo.

It's an ill wind that does no good for, now as a by-product of the campaign to drive foot-and-mouth disease from Mexico, mules and steel plows (left) are replacing the oxen (right) in a definite step forward for Mexican agriculture. Oxen, like all cloven-footed animals, are easy victims of the dread disease. Thousands of mules like those shown at right are arriving in Mexico and distributed as replacements. Watching the farmer use his new mules and plow are Senator Thye (left) and Congressmen Worley and Gillie.

made known to the Secretary of Agriculture on December 14.

On this date, we were ordered to investigate the cattle of the state of Puebla and, therefore, on the same date we moved to that state and repeated the inoculations. On December 17, we established an experimental laboratory where we carried on all inoculations, in order to establish and confirm the earlier presumptive diagnosis.

The result of experiments made in guinea pigs, hogs, lambs, goats, horses, and cows led us to the conclusion that the disease that had attacked the cattle of the state of Puebla in the form of stomatitis was foot-and-mouth disease.

Some time later, Dr. Maurice S. Shahan and Dr. Alpha E. Wardlow arrived in our country and repeated, together with us, the inoculations and experiments that are indispensable in diagnosing foot-and-mouth disease. They reached the conclusion that the disease suffered by the cattle of the Republic of Mexico was nothing less serious than foot-and-mouth disease, being in accordance with our first diagnosis.

This was the way in which the joint declaration by American and Mexican veterinarians was made, after we had established the diagnosis of the disease that, much to our regret, has appeared in our country.

Report on Inspection of Infected Areas in Mexico by a Congressional Committee

GEORGE W. GILLIE, D.V.M.

Washington, D. C.

It is a distinct pleasure and privilege to have this opportunity to report briefly to the Eighty-Fourth Annual Convention of the AVMA on the progress of the gigantic war being waged against foot-and-mouth disease across our border in Mexico.

On Dec. 26, 1946, the Department of Agriculture received reports of the first diagnosed case of foot-and-mouth disease on the North American continent since the outbreak in California was eradicated in 1929. The reported outbreak was in the vicinity of Vera Cruz, Mexico.

Two months later, on Feb. 28, 1947, the House and Senate unanimously approved a bill, sponsored by Senator Bushfield and myself, authorizing the Secretary of Agriculture to coöperate with the Government of Mexico in the control and eradication of this disease.

Congress almost immediately approved an appropriation of $9 million to inaugurate the campaign and carry it to the end of June. During the present fiscal year it is estimated that between fifty and sixty million more dollars will be expended on the campaign.

On June 28, 1947, a special committee of Congress, comprised of myself as chairman, Senator Thye of Minnesota, and Representatives Bramblett of California, Worley of Texas, Andersen of Minnesota, Miller of Nebraska, and Fernandez of New Mexico, left by plane for Mexico to observe and inspect the progress of the campaign.

The Committee returned to Washington on July 6, after an extended tour of the infected area which was preceded by conferences in Amarillo and Kingsville, Texas, with large groups of cattlemen in the border area.

The following observations are based on that tour and on the official findings of my committee, as reported to Congress on July 17, 1947.

First of all, I was very favorably impressed with the splendid spirit of coöperation displayed by the Mexican and American officials engaged in this fight against *aftosa*, as the Mexicans call foot-and-mouth disease. Operations appeared to be conducted throughout on a most congenial and coöperative basis.

I also was impressed with the fine support this gigantic program is receiving from the Mexican Government. The American people should recognize and understand the high degree of courage this takes. For centuries the ox has been, and remains today, the almost universal draft animal in Mexico. A farmer's oxen are almost as dear to him as members of his family. They are, in addition, his only means of support.

It takes a high degree of courage for the Government to tell farmers, most of whom can not understand the broad implications of the situation, that their oxen must be slaughtered and buried, even though they may have no sign of disease. The opposition political party in Mexico always is ready to make political capital out of any mistakes of the administration, and this

Dr. Gillie is Congressman from the Fourth Indiana District.

party has not been silent in the foot-and-mouth disease campaign.

To win public acceptance of the slaughter program, the Mexican Government has been waging a strong campaign of education. At first, the eradication program was opposed by a great majority of farmers. Today, it is estimated, at least 90 per cent of the rural population has been won over to support of this program. This trend is being accelerated as mules, harness, and plows are being made available to farmers as replacements for their oxen.

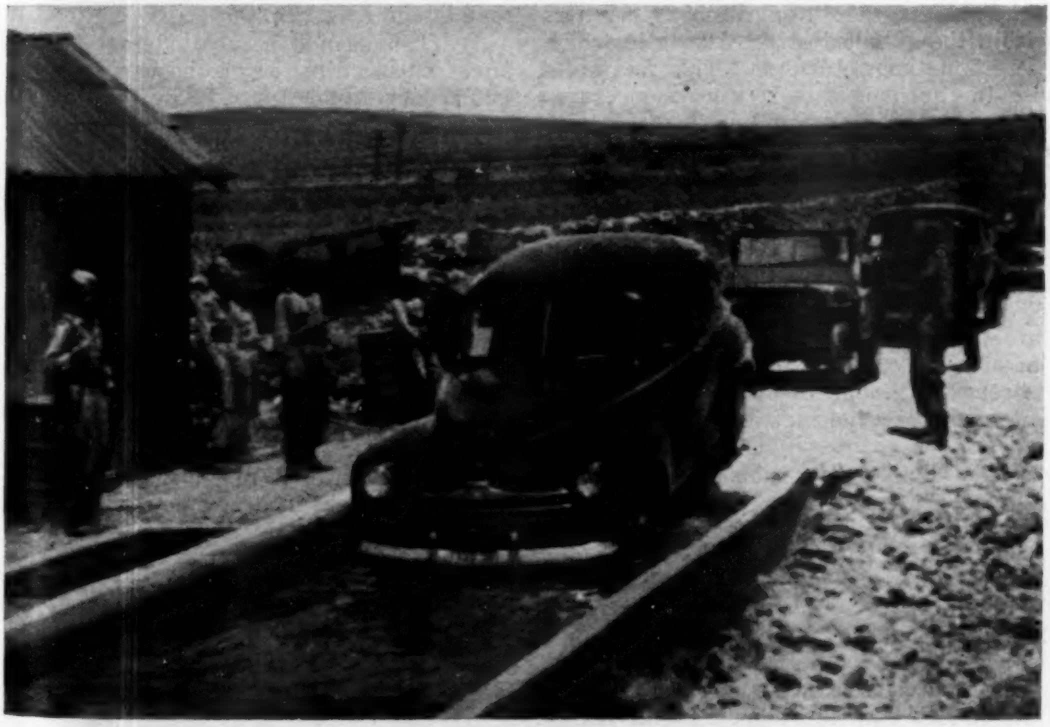
The Committee did not see the major military quarantine line that has been thrown across the country from Tampico, on the Gulf, westward and southward to the state of Colima on the Pacific coast. It was informed, however, by numerous observers, including ranchers from northern Mexico, that this quarantine is "pretty effective." The Committee was favorably impressed with the many quarantine lines which it found within the infected zone.

As soon as an outbreak is reported, a quarantine enforced by the Mexican Army is placed around the infected herd or area. This quarantine is as small as possible to contain the actual exposed and infected cattle.

Where there are several outbreaks in an area, or where a whole area within the infected zone is regarded as infected, a quarantine is placed around such an area in an effort to prevent the spread into uninfected areas within the large infected zone.

Wherever a road crosses a quarantine line, there is a disinfection station where persons or vehicles passing from the infected areas are disinfected. Vehicles are driven through tanks in which disinfecting liquid covers the tires. The occupants walk through troughs in which the liquid is held in saturated sawdust. Trucks passing through the quarantine lines are sprayed inside and out.

On our 850-mile auto trip, the Committee passed through about 75 such road blocks and disinfecting stations. The quarantine is entirely the responsibility of the Mexican Army and it was reported that more than 15,000 soldiers are being used for this purpose. The Committee was, on



—*USDA Photo.*

Disinfection trench through which all automobiles pass.

the whole, favorably impressed with the quarantine and disinfection precautions.

American equipment and supplies did not arrive in Mexico in volume until June. It is apparently being utilized as well as possible with the available manpower, and progress since its arrival is about all that could be expected.

The strategy of the campaign has been to concentrate the fight along the northern perimeter of the infection, block its northward progress, and drive it back southward and eastward until it has been eradicated.

According to the best available evidence, there has been no northward spread of the disease in the past few weeks. A few weeks before our visit, there were reports of isolated outbreaks outside the circle drawn by the forces fighting the disease on the northern perimeter. It was stated, however, that these were promptly eradicated and that since that time there have been no new outbreaks reported north of the control zone. The northern extent of the disease is still well south of the Tampico-Colima quarantine line.

In spite of the fact that the disease has now been present in Mexico for more than eight months, there are still many counties within the so-called infected zone in which there is no known disease. This fact gives rise to the hope that if control measures are adequate in scope and applied with sufficient speed, large numbers of cattle in the quarantine zone will not have to be destroyed and buried.

It is contemplated that all cattle which may possibly have been exposed to the disease will be liquidated, but if the active disease can be prevented from spreading into the present "clean" areas within the infected zone, many of these cattle can be consumed in Mexico City with a resultant saving in indemnities and burial expense.

It is almost impossible to realize the staggering size of this vast undertaking. The infection is scattered throughout some 30,000 square miles of territory ranging all the way from dense coastal jungles to 15,000-foot mountains. There are an estimated 2,500,000 cattle in this area, all of which—including sheep, goats, hogs, and deer—will have to be slaughtered unless the disease can be stopped in its tracks. The handling of men and machines required to do this job over this vast territory is a tremendous and expensive undertaking.

Those of you who remember the outbreaks of foot-and-mouth disease in America in 1914 and in 1929 will have some appreciation of the task which confronts the American and Mexican Governments in this current outbreak across our border. You will understand why the disease cannot be wiped out overnight, and why it will require the expenditure of millions upon millions of dollars to combat.

The following conclusions and recommendations were reached by members of my committee as a result of our observations in Mexico:

1) Operations must be speeded up. The eradication program is still lagging behind the disease, trying to catch up, instead of being ahead of the disease, pushing it back. In the opinion of the Committee, operations should be at least doubled in scope and intensity.

2) Funds should be made available immediately to enable the campaign to be pursued at the highest speed and intensity with which it can be operated. The faster the campaign can be pushed, the less it will cost in the long run.

3) There should be created the office of an executive director of the campaign, to be filled by a man approved by the Governments of both the United States and Mexico, who has the ability to direct a campaign of this magnitude in all its ramifications, and to bring about the speed, coordination, and efficiency which are absolutely essential to the success of this program.

4) The Committee endorses the present strategy of the campaign, which is to block northward progress of the disease and drive it back southward and eastward until it has been eradicated. If foot-and-mouth disease is permitted to spread into northern Mexico, it may very possibly be necessary to abandon completely efforts to control the disease in Mexico and to withdraw our own forces to the American side of the border in an effort to keep the disease out of this country. Certainly, it will be impossible to continue the present program on the present scale if the disease does spread into northern Mexico.

5) The Committee believes that everything possible should be done to find a market for uninfected cattle in northern Mex-

ico. It is estimated that there may be as many as 9,000,000 cattle in that part of Mexico lying north of the quarantine line. The normal market for these cattle is northward into the United States and southward into Mexico City. Both of these markets have been cut off by the quarantine imposed because of the foot-and-mouth disease. We believe that the Government should immediately assign the best available men to the job of getting existing packing plants in northern Mexico into operation, and assisting the operators of those plants in finding export markets for their meat.

6) Finally, the Committee is convinced that, regardless of salvage operations or other expedients, the only way the campaign against foot-and-mouth disease can be waged successfully is to kill and bury all infected and exposed animals as rapidly as it is physically possible to do so.

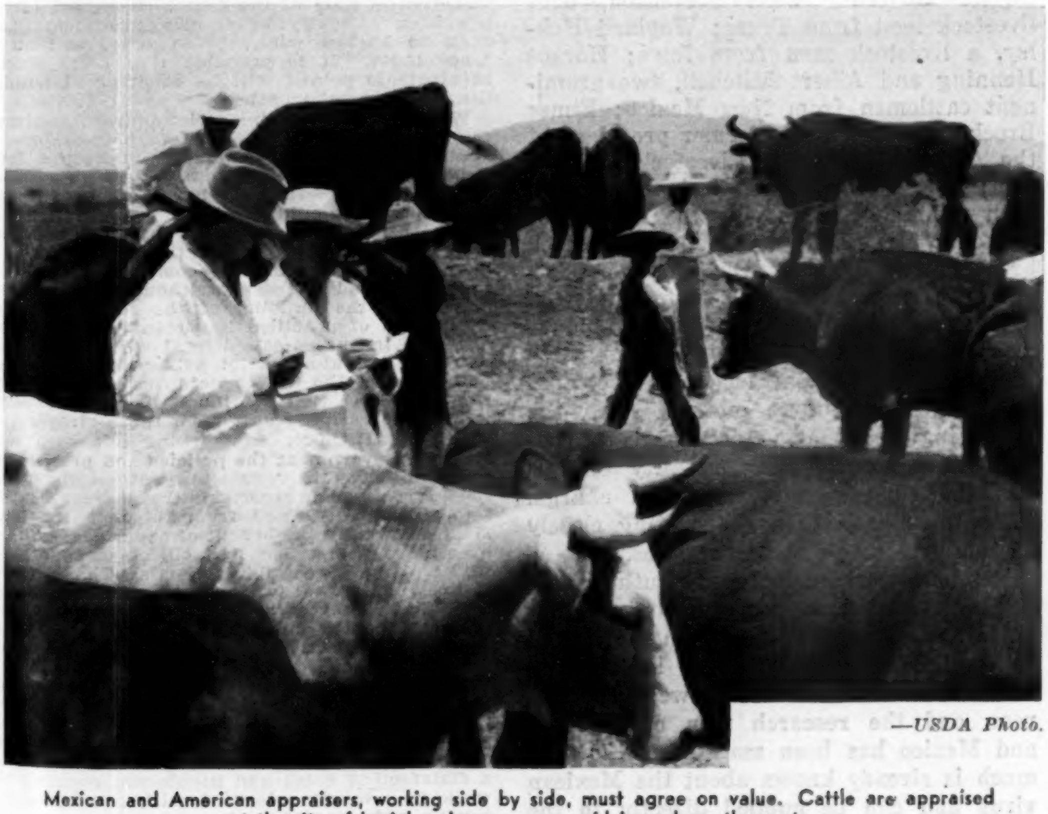
The lines are drawn in this great battle to keep the dread foot-and-mouth disease out of the United States. The chips are down. The stakes are high. If our vast American livestock industry — the very backbone of a strong farm economy—is to be preserved and advanced, we must wage this war to a successful conclusion, no matter what the cost.

Some Facts Concerning the Eradication Program in Mexico

M. R. CLARKSON, D.V.M.
Washington, D. C.

This campaign is like a war. The economic and political considerations and the technical problems of combating the disease are tremendous. The work is being handled in Mexico by a joint commission composed equally of members from the United States and Mexico. All decisions are arrived at jointly by these members, and the active direction is in the hands of two men, Dr. M. S. Shahan of the U. S. Bureau of Animal Industry and Mr. Oscar

Condensed from stenographic transcript of Convention Proceedings.
Field Inspection Division, Bureau of Animal Industry, USDA, Washington, D. C.



—*USDA Photo.*

Mexican and American appraisers, working side by side, must agree on value. Cattle are appraised at the site of burial and owners are paid in cash on the spot.

Flores, the Secretary of Agriculture for Animal Industry of Mexico.

The work is so organized that the men work in teams: teams of veterinarians on inspection, teams of appraisers, teams of paymasters, and teams of sanitary technicians to see that effective disinfection procedures are followed. The quarantine is handled by 15,000 Mexican Army troops.

The Bureau has more than 250 men in Mexico, and the Mexican Government has an equal number. In addition, the joint commission has employed more than 500 men who operate the mechanized equipment and otherwise help to keep the large campaign functioning. The Bureau would like to recruit at least 100 additional veterinarians and 300 sanitary technicians to help in this work. Applications from interested persons should be sent to the Bureau in Washington. A knowledge of Spanish would be helpful.

An advisory committee drawn from the livestock industry is giving us a great deal of assistance. Serving on this committee are: Chancellor Weymouth and former Governor Coke Stevenson, both livestock men from Texas; Wayland Hokley, a livestock man from Iowa; Horace Henning and Albert Mitchell, two prominent cattlemen from New Mexico; Elmer Brock from Wyoming, former president of the American National Livestock Association; Roy Cowden and Carlos Ronstadt, both prominent in the livestock affairs of Arizona; Mr. Boyle, a California livestock breeder; and Dr. C. U. Duckworth, Assistant Director of Agriculture of California.

Many suspected cases of foot-and-mouth disease are reported daily in various parts of the United States; each of these must be checked carefully. In each state, the practicing veterinarian is urged to consult his state livestock sanitary officials and the Bureau veterinarian in charge. These men have been coöperating closely on this problem of suspected cases.

Research work on foot-and-mouth disease has been carried on in many countries, but there has been no such work in the United States because of the danger in handling the virus. Close contact between the Bureau and the research men of England and Mexico has been maintained, so that much is already known about the Mexican virus and can be applied directly to the problem in Mexico. This research will be intensified.

DISCUSSION

DR. R. A. HENDERSHOTT (Trenton, N. J.): Is there need of, interest in, or any opportunity to obtain a fence along the border to assist in protecting us? Also what are we doing to protect ourselves against the introduction of virus through visitors using airplanes for tranportation?

PRESIDENT SIMMS: I will attempt to answer the question about the fence, and I will ask Dr. Clarkson to answer the second question. The Bureau of Animal Industry has been interested for many years in a fence along the Mexican border. We have taken the attitude expressed in the adage, "Good fences make good neighbors." We have thought for a long time that we should have a fence along this border, evidenced by the fact that as much as forty years ago some Bureau funds were spent in building a part of such a fence. We have advocated it continuously since that time. The livestock interests have supported this recommendation and, since foot-and-mouth disease has appeared in Mexico, there has been a rather intensive effort to have a fence built. The building of it would not be an activity of the Bureau of Animal Industry but, rather, of the Department of State, and the International Boundary Commission. A bill to implement the building of a fence along the entire border was introduced into the last Congress but failed to pass; it may get through at the next session. Some funds have been available and a small amount is still available, about $300,000, I believe, for the construction of part of the fence. However, there has been difficulty in securing the materials such as barbed wire, woven wire, and steel fence posts. It is probable that some fence, at strategic points, will be constructed within the next several months.

We realize that with a strict quarantine along the border, this fence problem becomes more acute. It is almost impossible to keep a few animals from straying across, and, if we assume anything other than a hard-boiled attitude, these strays would increase very materially. On the other hand, we know that it is a hardship to a man, trying to do the best he can, to have some of his animals come across and be impounded and destroyed, without any remuneration. So, the building of the fence becomes a question of practical importance, and it is a fine step in our so-called good will policy. We will just get along a lot better with folks on both sides of the line if we do have a fence, so we won't have that continuous irritation which will, of necessity, result from these strays.

DR. CLARKSON: In working out with the Mexican government the policies and procedures to be followed in regulating automobile, railroad, airplane, and steamship travel from Mexico into this country and from this country into Mexico, we have the benefit of experience gained over many years. The first object, of course, is to keep out susceptible animals. The next is to keep out animal products, hay, straw and the like, that might carry the virus. Those things are forbidden to enter this country, and I think the patrol inspections at the border are effective in that respect.

With respect to the movement of people, the last quarantine line established, as Dr. Gillie mentioned a while ago, is from Tampico on the east to Colima on the west. Automobiles coming through there are required to go through a disinfecting point and people are required to walk in sawdust saturated with a solution of caustic soda or soda ash.

At the border, the precautions are to keep out clothing that shows signs of having come in contact with animals, either on a farm, dairy, or abattoir. Those same precautions have been used in the outbreaks in this country.

DR. HENDERSHOTT: Is there any restraint on visitors, that is, ordinary citizens of the United States visiting these abattoirs where the animals are slaughtered?

DR. CLARKSON: There are military guards, and visitors without official business are not supposed to be allowed to enter. That is one of the things that needs protection.

MR. WILL J. MILLER (Topeka, Kan.): I am much disturbed over the possibility of heavy tourist travel after the rainy season is over, in November, December, January, and February, when it is most delightful to be in Mexico. People coming back, in my opinion, should be shrouded and disinfected. I know that is a handicap, and it is going to take a lot of work. I think tourists can carry the infection on their clothing or on their shoes. The cars especially should be disinfected, which I understand is probably not being done at the present time. Is that right?

DR. CLARKSON: The cars are being disinfected. There have been individual instances where it hasn't been as effective as it should be, but effective action is being taken along that line.

We have not felt it necessary to fumigate people's clothing at the border. In that respect, we have air travel from Brazil, from France, from countries of Continental Europe and from Asia that has been going on these many years, with essentially the same precautions being taken. . . .

DR. HENDERSHOTT: If we are to protect the livestock industry of the country, I think it is time we gave serious consideration to cleaning and disinfecting planes as they come here from foreign ports. If we bring in animals, we put them through a quarantine station, but we allow man to travel back and forth and do pretty much as he pleases. Human beings are almost as much of a hazard to us as are animals. We are also concerned about the Mexican laborers, agricultural workers who are leaving that infected area down there and coming up here.

DR. CLARKSON: As to the Mexican laborers coming up to this country, many of them came from the infected areas of Mexico. That movement was handled by the labor branch of the Department of Agriculture, and I can assure you that effective measures were taken there to see that the clothes were clean, and there was no chance of bringing the virus with them.

MR. MILLER: What about the laborers that cross the border illegally?

DR. CLARKSON: The Customs and Immigration Services have been working on that problem many years.

DR. HUGH HURST (Salt Lake City, Utah):

—USDA Photo.

These animals which were slaughtered in a trench near Salvatierra on July 3 are a necessary sacrifice if Mexico is to be freed of foot-and-mouth disease. The carcasses shown here are a part of the 1,500 cattle assembled for slaughter from surrounding areas. After being killed, hides are slashed and sprinkled with lime, then covered with earth to speed decomposition and prevent possible salvage which would spread disease.

Having lived on the Mexican border for pretty nearly half of my life, I know a good deal regarding the wild animal life and the birds.

I would like to know if anything is being done regarding the control of the turkey buzzard. The Mexican people regard that bird as an essential scavenger to clean up the decaying flesh of animals that die, and they die of all sorts of diseases.

I have regarded the buzzard as one of the greatest enemies to sanitary measures of disease control in bordering areas. What is being done?

DR. CLARKSON: As to the experience with the buzzards, experience indicates that the possibility of their carrying the disease is not very great. In fact, in eradication campaigns in this country, if the buzzards had been effective carriers of the virus, it is doubtful that the campaigns would have been successful. We are relying on that experience.

As for wild animal life, we have some wild animal experts in Mexico; the Mexican Government has also. Susceptible wild animals in the infected area are a problem.

DR. A. E. CAMERON (Ottawa, Ont.): Has the origin of the outbreak been discovered definitely? I understand that the infection is of a mild nature. Can you tell us the death rate, the mortality, and the natural course of the disease and, also, if there is only the one type of infection?

DR. CLARKSON: As far as we know, there is only one type of foot-and-mouth virus in Mexico; that is modified "A." The research done in the laboratories of England has established that, as far as we have gone so far. With respect to the origin of the outbreak, we can only recite the facts as we know them and as they have been recited a number of times, and then take off from there.

DR. GILLIE: To answer Dr. Hendershott's question, I might tell you the story of the British soldier who had been in Germany. While he was there, he visited a German farm where they had had foot-and-mouth disease. A month later he went home to Britain. He changed all of his clothes but did wear the same shoes, his military shoes, and he carried that disease home to his father's herd in Britain, a fine Shorthorn herd. That shows how careful we must be in the travel back and forth across the border. . . . The possibility of carrying the infection across the border is great. We will have to guard against that just as much as we can. It is still some 300 miles from the border; if it should get within 50 miles of the border, there will be no chance of holding it back, because these buzzards the Doctor has spoken about, and the wild animals that sift through the fence spread the infection. So, we must be very, very careful.

PRESIDENT SIMMS: I would like to add one word to the discussion concerning the handling of airplanes in travel. Dr. Clarkson pointed out the fact that foot-and-mouth disease is in practically all parts of the world except the North American Continent and, of course, New Zealand and Australia, and perhaps the Scandinavian peninsula. So, any precautions concerned with airplane travel should not be precautionary just for people coming from Mexico but should include all of those coming from Continental Europe and from South America. As a matter of fact, it is not many more hours from Europe to North America than it is from Mexico to the central part of the United States, nor is it very much longer from South America to Miami, Fla., than it is from Mexico City to Chicago.

The Bureau of Animal Industry, of course, has no jurisdiction whatsoever over the movement of people; we do have jurisdiction over the movement of domesticated animals. Any time, then, that we attempt any procedures and measures concerned with people who come into the country, we must have the support of other agencies. We realize there is a possible danger. We know, as a matter of fact, that since we have had transoceanic flights of airplanes, we have had people coming in constantly from Continental Europe, and they have not introduced the disease. Please do not misunderstand this statement. Negative evidence is never final. . . . I am not saying there isn't any danger. I am saying we have had these folks coming, and up to the present time they have not brought the disease. Moreover, the practical question of trying to disinfect the clothing of persons who come in is one to which we do not have an answer.

It is our belief, and our strong belief, that the best protection is in the quarantine, an effective quarantine, where the disease exists. If the farm in Europe or the farm in Mexico, on which foot-and-mouth disease is present, is properly quarantined, then the people coming in from Europe or South America or Mexico or wherever it is, will not be those who have exposed themselves on those farms. That, we feel, is the most effective way of preventing the international movement of people acting as disseminating agents for foot-and-mouth disease. . . . If and when we get an efficient quarantine in the areas, on the farms where infection exists in Mexico, I think we will do a much better job than we could ever expect to do by attempting to disinfect the individual passengers as they come in on the plane. . . . Several months ago, when the eradication force was small, there was practically no quarantine around the slaughterhouses in Mexico. Two things have happened since then: The quarantine has been materially strengthened, and the number of infected animals around the slaughterhouses has been materially decreased if not reduced to the zero point.

I am taking too much time, but I want to give you this picture. When the control program was first set up, it was realized that sufficient means were not available in Mexico to bury the infected and exposed animals. In some instances, with the very best efforts on the part of everybody concerned, it was not just a day or two but many days after the animals came down with symptoms before it was possible to destroy them. That was in the area where a slaughter program was under way. That is no criticism of anybody; it is just a statement of fact. Everybody was doing the very best they could. It was deemed advisable, under certain conditions, to ship those animals to market and kill them, the animals that had not yet developed symptoms, rather than to hold them on those farms.

So, when the program first started, a fairly large percentage of the animals from the immediately infected zones were sent into Mexico City and were slaughtered there. As time went on, fewer and fewer animals were slaughtered at the slaughterhouses and more of them went to slaughter at the trenches. So, now the number of exposed animals going to Mexico City has been practically reduced to zero. The animals still going there, we have reason to believe, are not immediately exposed animals.

We are not trying to say that we have a perfect system in Mexico. I don't think we ever had a perfect one in this country, when we had outbreaks here. We did have one good enough to stamp out the disease, however. We do believe that the organization and the methods of procedure in Mexico are improving day by day. We appreciate your interest in the problems and are just simply trying to give you the facts.

A Proposed National Board of Veterinary Examiners

W. R. KRILL, B.S., D.V.M.

Columbus, Ohio

MY PURPOSE is to tell you something about the value of a national board of veterinary examiners and, in a general way, how a board of this kind would operate. There is a National Board of Medical Examiners, which has been in continuous operation since its organization in 1915. The National Board of Dental Examiners was organized in 1928. From a study of these, as well as other professional national boards, we can derive valuable information as to the function, plan of organization, and benefit to be expected even though modification must be made to meet the special problems of our profession.

The consideration of some centralized board of examiners for the veterinary profession in the United States is not new. Back in 1935, the California State Veterinary Medical Association appointed a committee, which formulated and presented a report to that association on the feasibility of centralizing veterinary state board activities in the United States. The report of this committee was considered of such interest by that association that a resolution was offered and passed for the report to be submitted to the American Veterinary Medical Association. The report of the committee was given to the Executive Board of the AVMA at its meeting in Oklahoma City in 1935. Following considerable discussion, the chairman of the Executive Board appointed a committee consisting of Drs. L. M. Hurt, chairman, O. V. Brumley, and C. H. Hayes, to draft a proposal for the organization and operation of a central board of veterinary examiners. This committee made a careful study of the problem and prepared an excellent report. However, for some unrecorded reason this report was filed away in the archives of our association, without any official action having been taken. The matter was again brought up for consideration in the meeting of the House of Representatives of the eightieth annual meeting held in St. Louis in 1943. This led to the appointment of a committee to study the feasibility, and to present a plan of organization for a national board of veterinary examiners. The work of this committee has been handicapped from the start due to the war years and the difficulty of getting the members together. Also, since our association meetings during this period were largely skeletal and business sessions, any official action on such an important question might not have represented the true thinking of our profession. However, the committee did survey the regulatory officials of the various states to determine their reactions toward the establishment of such a board. In general, the survey indicated that there was a real need for a change from our present system of licensing veterinarians and the multiplicity of examinations for various fields of service within our profession. We should not neglect pointing out, however, that there were some who utterly opposed the whole idea. The general plan of operation and organization of a national board of examiners has been presented to the House of Representatives, and this past year, upon recommendation of this body, funds were made available for the committee to meet and work out detailed plans to be submitted at some later date. One meeting of the committee was held during the year and, while a great deal of progress was made, we soon discovered there were many problems which required careful consideration, and that we could not possibly have a plan completed for presentation at this session. It was generally agreed, however, that the entire membership should be informed in a general way as to what the adoption of a national board of veterinary examiners would mean to our profession, so that any future action by our association would represent the sound thinking of a well-informed membership.

At the outset, let me state that the establishment of a national board of veterinary examiners would not mean that one who has successfully passed its examina-

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tions automatically becomes eligible to practise his profession anywhere in the United States. It is entirely optional on the part of each state as to whether they wish to accept the examination of the national board in lieu of their own examination. In most states, this would require changes in their practice acts. The individual state examining boards would still retain the right to reject undesirable applicants and revoke their licenses on the same basis as applied to other licensed practitioners. It should be clear that there is nothing in the establishment of this board which would interfere in any way with the activities of the individual state licensing board or its control and enforcement of the practice act within its respective state.

In considering the establishment of a national board of veterinary examiners, we must not overlook the influence it will exert on the future of our profession. In the thinking of the committee and from information gathered from the operation of other national professional examining boards, the following are some of the benefits to be derived:

1) It should stimulate scholarship by serving as an incentive to students to prepare themselves to pass these examinations which will be far more comprehensive than now required in most states.

2) It should raise the standards of veterinary education by serving as a stimulus to the faculty of our veterinary colleges to put forth every effort to provide their students with the broadest knowledge in their respective fields, in preparing for these examinations.

3) It should bring about standardization of our veterinary curriculums.

4) It should eliminate the taking of many useless examinations for each of the various field of service, which a graduate may desire to enter.

It is hoped that the results of the national board examination will be acceptable as a substitute for examinations now required for service in the Regular Army Veterinary Corps, the United States Public Health Service, the United States Bureau of Animal Industry, the accredited veterinarian certificate, and other civil service examinations.

5) It will place the veterinary profession on a basis similar to allied professions which have actively organized national boards.

6) It should improve the standards of examinations as now given in many states. There is little doubt that many other benefits will result, once the program gets under way.

One of the most important considerations in setting up an examining board of this kind is to provide representation from all segments of the profession in equitable proportion. The committee discussed this matter at some length and have tentatively agreed on the following membership of the board:

Council on Education—2 members.
State veterinary examining boards—5 members.
Veterinary colleges—5 members.
Research workers—1 member.
Chief of the Bureau of Animal Industry or designated representative—1 member.
Representative of the Veterinary Corps, United States Army—1 member.
Practitioners—6 members.
State livestock regulatory officials—1 member.
Elected by the national board—5 members.

Of the six practitioners to be elected for the board, five are to be elected by the House of Representatives of the American Veterinary Medical Association.

Of the five members to be selected by the board after it is once organized, there may be some of professional rank, teaching in accredited colleges, who need not necessarily be veterinarians.

Each group would select its own representatives subject to the approval of the board. In the selection of members, geographical distribution should be given some consideration.

It was also agreed by the committee that the examinations should consist of three parts. Part 1, covering the fundamental sciences, can be taken by a student any time following the completion of two years of professional training. Part 2 is to cover the more practical subjects and is to be given at the completion of the work of the senior year. To be eligible for part 2 a student must have successfully passed the examination covering part 1. In order to be eligible for part 3, a student must have successfully completed the examinations in parts 1 and 2. Part 3 is to be strictly a practical clinical examination.

The examination, above all things, should be a fair examination, not interspersed with catch questions but one planned to draw out the real scope and thoroughness of each man's training and to determine his ability to remember details.

This, in a general way, represents the

tentative thinking of your committee to date. There are still many details to be worked out. It is planned to complete the work in the near future so that a completed plan can be published in the JOURNAL and be ready for final action at the next annual meeting of our association. Any suggestions or criticisms which you may have relative to the work of the committee thus far will be most welcome.

Brucellosis can be conquered. This must be done first on a herd basis, then on a county-wide scale, later on a state, and then on a national plane. The means are available.—*R. C. Klussendorf before the American Association of Medical Milk Commissions at the Atlantic City Convention.*

The World's Horses

Data gathered by the Office of Foreign Agricultural Relations show that the number of horses in the world totaled 75,200,000 in 1946, or 19,500,000 fewer than in 1938. The total for the period 1834-1938 was 94,700,000. The decline is attributed to war losses, agricultural mechanization, and devastated areas. From 1935 to 1945, Russia suffered a loss of 7,500,000 out of its former total of 15,600,000, but gained 1,000,000 by 1946, while North America shows a continued decline. The OFAR figures are shown in the following table.

Distribution of the World's Horses in Thousands

Area	1935	1945	1946
North America	18,600	15,600	14,700
Europe	22,900	18,000	17,900
Russia	15,600	7,600	8,000
Asia	14,700	11,900	12,100
South America	17,700	17,600	17,800
Africa	3,100	3,200	3,200
Oceania	2,100	1,600	1,500
Totals	94,700	75,500	75,200

Except for France and Great Britain, the number of horses in Europe is higher than in the recent prewar years. France lost heavily by German requisitions as well as by wartime casualties. In North America, mechanized farming accounts entirely for the decline.

The medicinal treatment for swine erysipelas infection in turkeys, recommended by the U.S. BAI, is the injection of penicillin into the wattles.

Horses Slaughtered Under Federal Inspection in the U.S.A. 1940-1947

	Number slaughtered	Product		Weight (in pounds)
Fiscal year ended June 30, 1940	28,178	Total, fresh,	estimated[1]	20,000,000
			cured	1,960,353
			chopped	2,827,630
Fiscal year ended June 30, 1941	14,641	Total, fresh,	estimated[1]	11,000,000
			chopped	843,787
Fiscal year ended June 30, 1942	30,787	Total, fresh,	estimated[1]	22,000,000
			chopped	2,194,623
Fiscal year ended June 30, 1943	39,935	Total, fresh,	estimated[1]	28,000,000
			chopped	6,602,831
Fiscal year ended June 30, 1944	60,501	Total, fresh,	estimated[1]	43,000,000
			chopped	10,235,348
Fiscal year ended June 30, 1945	59,674	Total, fresh,	estimated[1]	42,000,000
			cured	814,834
			chopped	8,871,887
Fiscal year ended June 30, 1946	103,880	Total, fresh,	estimated[1]	73,000,000
			cured	5,431,069
			chopped	13,087,770
			canned	9,114,669
(8 months) July 1946 to February 1947, inclusive	156,872		cured	7,555,497
			chopped	17,287,527
			canned	56,572,391
			rendered	15,790
Fiscal year ended June 30, 1947	....	Total, fresh,	estimated	165,000,000

—*From the National Provisioner.*

[1]Based on weight of dressed carcass equaling 700 lb.
Source: Meat Inspection Division, Bureau of Animal Industry.

New England's "Swamp Fever" Epizootic

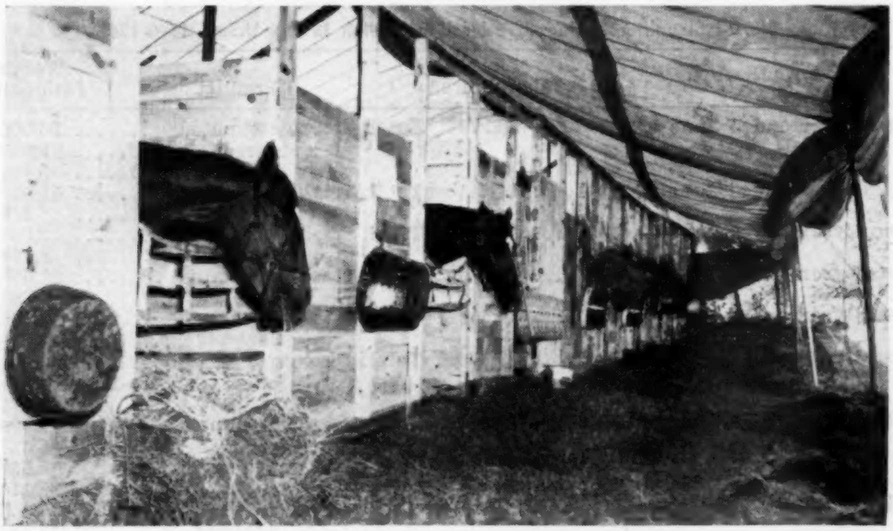
WHILE THE spotlight is on the equine infectious anemia outbreak in the New England area *(see* Oct. JOURNAL, p. 303, and editorial, this issue), other areas of the country can be given no assurance that the disease has not spread elsewhere, since all of the horses from Suffolk Downs, (Mass.), the main springboard of infection, were not shipped to the now quarantined Rockingham Park (N. H.) course. The horses which were shipped elsewhere —and apparently no one has yet tabulated all of the "elsewhere" shipments—are the ones to be most feared, because they may establish new foci of infection that could decimate the Thoroughbred industry. For this reason, veterinarians in every state should remain alert for signs of this disease and, also for this reason, a brief review of the recent outbreak seems in order, together with a review of the known character of "swamp fever."

To get first-hand information on the situation when press reports of the Rockingham outbreak first appeared, the editor of the JOURNAL wrote to State Veterinarian R. W. Smith of New Hampshire, who verified much of the press information and supplied additional pertinent facts given below.

HISTORY OF THE OUTBREAK

On Aug. 10, 1947, Dr. Harold Lewis, of Nashua, N. H., reported to State Veterinarian Smith that he had tentatively diagnosed as infectious anemia an outbreak of disease among horses at Rockingham Park track (near Salem, N. H.). Subsequently, Dr. Smith notified the U.S. BAI of the suspected outbreak and Drs. L. O. Mott and C. D. Stein of the Pathological Division were sent to the scene. Both shared Dr. Lewis' opinion that the disease was infectious anemia. Blood samples drawn from suspected cases were shipped to the Animal Disease Station at Beltsville, Md., where horse-inoculation tests, the results of which were announced early in September, confirmed the diagnosis. On August 23, prior to positive diagnosis, Dr. Smith placed all horses at the Rockingham track under quarantine.

Facts obtained from Dr. Smith and other sources indicate that the first case in the New England outbreak probably oc-



—*The Blood Horse.*

Death row" in the swamp fever quarantine tent at Rockingham Park. The first horse (left), "West Fleet", a good stakes winner of last year, made his last start July 23 and died September 21 after an illness of about two months.

curred early in the spring in a horse shipped from Florida to the Suffolk Downs track near Boston. The horse, "Skyskipper," was ill with an undiagnosed ailment at Hialeah Park, but recovered prior to shipment to Suffolk Downs, only to become sick again with fever and other symptoms of infectious anemia. He died early in May and autopsy revealed lesions typical of this disease. Other cases of "mysterious fever" are also reported to have occurred at Suffolk Downs. The horses were then shipped to Narragansett Park, R. I., and more cases of the same trouble developed. At the close of this meet, they were returned to Suffolk Downs for that track's second meet (July 7-Aug. 9) and it was there, when a number of horses came down with fever, that suspicions of infectious anemia were first reported. All the while, however, there was no confirmed diagnosis. From here, a large number, but not all, of the animals were shipped to Rockingham Park, where the currently publicized outbreak occurred and was diagnosed.

Source of Infection

Though it seems likely that the initial source of infection is traceable to Florida, where many of the horses wintered, or possibly (according to one reporter) to New Orleans, a recorded influx of horse flies at Suffolk Downs may have helped to disseminate it. Another important item is the ever-menacing hypodermic syringe in the hands of careless and inexperienced operators. It is definitely known that when horses first began to show symptoms of this disease, stablemen and trainers rushed in with penicillin, sulfonamides, and what-have-you in an effort to plug the trouble. The Bureau intimated and eye-witnesses confirmed the probability that syringes and instruments which went unsterilized from sick horses to healthy ones were a major factor in spreading the disease.

Symptoms and Lesions

Dr. Smith reports that all of the sick horses carried high temperatures and lost weight, and on postmortem examination showed enlarged livers and spleens. In addition, the hind quarters had a peculiar gait and the patients did not respond to treatment. Other typical symptoms observed in swamp fever are progressive weakness, depression, and dropsical swellings in the lower portions of the body and legs. In acute cases, the attacks of fever are frequent and severe (105 to 108 F.) and death usually occurs in fifteen to thirty days; in subacute and chronic cases, the attacks are less frequent and not as severe. Other symptoms to look for in suspected cases are muddy discoloration of the visible mucous membranes and small hemorrhages on the nictitating membrane and nasal septum. Animals suffering from the chronic form often eat ravenously yet lose weight, and they may live for as long as fifteen years after the initial attack.

Mild cases may show none of these symptoms except an irregular, recurrent fever and, therefore, pass unnoticed. For this reason, it is important that temperature readings be recorded twice daily, morning and afternoon, in suspected cases. The incubation period averages about two weeks, but some animals have been reported to show symptoms within a week after exposure. The disease also appears in a latent form in which symptoms never become apparent though the virus is present in the blood.

The Virus

Animals once infected with the virus of equine infectious anemia remain infected for life and are dangerous for breeding purposes because stallions may infect mares and mares may transmit the virus to their offspring. The virus has a high degree of resistance to chemical disinfectants and to heating, freezing, and drying. It may be transmitted by any medium that has been in contact with infected blood or body tissues, such as surgical instruments, curry combs, blankets, bridles, feed, water, and biting insects. Its virulence fluctuates widely according to individual susceptibility of the host, frequency of passage, and method of exposure. Laboratory attempts to transmit the infection to animals other than Equidae have not been successful.

Action by Thoroughbred Interests

Horsemen regard this outbreak as the most serious threat to racing that has ever existed and it appears certain that Thoroughbred organizations will back to the limit any veterinary research designed to develop means of immunization, treat-

ment, and control. The Grayson Foundation, a privately supported institution engaged in research on equine diseases, will probably figure prominently in coming investigations of this malady.

Insurance companies are complicating the disposition of infected animals by their unwillingness to agree to destruction, according to R. W. Collins in *The Blood-Horse* (Sept. 20, 1947). They prefer to wait out slow deaths on the gamble that the animal may linger on until the policies run out.

Likewise, horsemen who do not have insurance are reluctant to order destruction of their animals, especially if such animals represent their entire capital and source of income. In view of this, it is believed that some owners may be hushing up the presence of the disease in their stables. This practice, by itself, could become the catapult of a nationwide catastrophe for the horse industry.

To cope with this problem, the Thoroughbred Racing Associations of the United States, Inc., has offered to indemnify owners in the amount of $2,000 for each animal slaughtered following a positive diagnosis of infectious anemia. The offer stipulates that the registry certificate must be surrendered upon payment and that there must be acceptable evidence of slaughter and proper disposal of the carcass.

At the time of going to press with this issue, there are indications that the outbreak is subsiding. Steps are being taken to make certain that no horse is released from the Rockingham quarantine area until inoculation test proves it free of infection. The swamp fever toll at Rockingham, as of October 1, is 46 animals dead or destroyed, 13 confirmed cases, all insured, being held in isolation by owners who hope to collect insurance, and 2 uninsured confirmed cases being held by owners who hope for a "miracle" recovery—a total of 61 cases.

Swamp Fever in Venezuela

Venezuela has a story to tell about equine infectious anemia that should be of interest to American veterinarians now studying the New England outbreak of that disease. What a few years ago was thought to be one disease of horses in Venezuela finally has been shown to be two distinct entities: (1) derrengadera, caused by *Trypanosoma venezuelense* and amenable to treatment with Naganol, and (2) *peste boba*, or equine infectious anemia, a virus disease that does not respond to drug treatment.

Relationship of Fright Disease and Canine Distemper

The virus of canine distemper and that of the idiopathic encephalitis that is associated with fright disease can be demonstrated, postmortem, in the brain substances of affected dogs (Verlinde: *Tijdschr. Diergeneesk., 67,* 1940: 825). Fright disease followed shortly with fatal distemper, a sequence commonly observed in the small animal clinic, is a demonstrable encephalitis including the presence of Carré's virus in the brain cells. But that does not remove fright disease from the category of alimentary intoxications or perhaps an independent specific virus. The two causal agents coöperate, the one preparing the ground for the other or acting alone. One cannot dismiss the enzoötic character of fright disease or encephalitis-like symptoms as coincidental (Klarenbeek: *ibid.* : 852). Whatever may be the cause, it has the earmarks of an essential encephalitis. Klarenbeek, experimenting with breads, was able to produce and cure fright disease at will, yet he could not always exclude infectious agents.—*Abstr. Rec. d. Méd. Vét., 122, June, 1947:271.*

Whole Blood-Sulfonamide Treatment for Brucellosis

A new whole blood-sulfonamide treatment for brucellosis was described by Dr. I. Forest Huddleson, of Michigan State College, before the Fourth International Congress for Microbiology, in convention at Copenhagen, during the week ended July 26, 1947. First, blood is injected, then sulfadiazine is given in small doses for one week. The treatment is based on Huddleson's original theory that the drug does not actually destroy the germs, but that it increases the action of the antibodies in the serum which, in turn, kill the harmful bacteria. He hopes to perfect a compound containing both the drug and antibodies in order to eliminate the need for a blood bank.— *Science, Aug. 8, 1947.*

Historical Sketches and Memoirs

IV. Organized Veterinary Medicine

(Continued)

L. A. MERILLAT

Chicago, Illinois

13.

The young set of '47 makes a gosh awful boner by castigating the old veterinarians for their lack of so-called education. Along with about 95 per cent of the general population, all they lacked was orderly knowledge of the basic sciences and liberal arts such as a veterinary student of this day ought to possess to put veterinary medicine on a level with other branches of science. 'Til that level is assuredly reached, neither boasting about the present nor criticizing the past makes much sense.

What Price History?

Commenting on mass education, a popular radio commentator pointed out the other day that, before the turn of the century and for a spell thereafter, less than 5 per cent of the country's young men could afford to go to college. Except for a few scattered students who washed dishes at the boarding house or lunchroom to keep solvent, college degrees went only to aristocrats, he declared. The fact was not brought up to take a slam at young men who could afford to go to college. On the contrary, this undeniable truth was recalled to show that if professional colleges had enforced present day standards of education there wouldn't have been enough doctors and lawyers and preachers to serve the people of our booming Republic. Veterinary students were given what would now rate as vocational training. They were taught the practice of veterinary medicine within the ability of their teachers—skipping the basic branches in order to get more of them on the job of serving the people without unnecessary delay. On the whole, veterinarians were no less qualified in the line of duty than other professional groups and, as time was to show, relatively speaking, they were no less useful than their better educated successors who are not wise to the history of education in the U.S.A. From colonial days right up to the turn of the nineteenth century, physicians went abroad to round out their American-acquired knowledge, while the veterinary surgeons had to "learn their business" in the barnyard and stable with or without a fatuous diploma.

14.

Just what is education? No two educators define it alike. In my muddled mind, speaking of our field only, education ought to be defined as "Knowledge of what has been achieved and of errors that have been committed." A veterinary education below that level takes the possessor that much closer to the grade of the self-made doctors of earlier days. As to a profession, its achievements are eulogized in its literature but its boners are too well suppressed to be dodged in the future. In effect, as the reader must have noted (assuming these sketches are read), cutting the eulogies is as premeditated as digging up the mistakes. For example, there is no apology to make for bringing up the breach between the national and the state associations for the reason that the issue has been and still remains as much a factor in association work as in national politics. The federal-state feud was started by Alexander Hamilton in 1789 and has been kept alive in statesmanship unto this day, although neither side likes to confess dependence upon the other. The very same polemics obtain in the organization of industrial and professional groups. The issue is something to face for the common good. Vague as it may seem in our horizon, it is still in the tableau.

Federal-State Discord a Reality

Not to be forgotten is that no national society has ever flourished in this country under central command until aided by the federation of functionating local units delegated by written by-laws to take care of home affairs and to bring them forward to a central GHQ for over-all control. There is no better example to cite than that or-

Historical Sketches and Memoirs will close in the December issue with the story of the Kansas City Meeting of 1917.

ganized veterinary medicine remained quite sickly for seventy years because of having failed to keep this fundamental principle at the top of its agenda. Basic as it was known to be, federal-state relations in the AVMA and state associations was a living but sleazy issue from 1884 until 1913 when enlivened by President John R. Mohler at the Association's Golden Anniversary in New York, through the appointment of a competent Committee on Reorganization composed of:

D. E. Salmon, Chief of the U.S. BAI, Chairman.
James Law, Dean of the New York State Veterinary College.
George H. Hart, Veterinary Science Department, University of California.
D. M. Campbell, Editor of Veterinary Medicine, Chicago.
C. J. Marshall, Secretary of the AVMA, School of Veterinary Medicine, University of Pennsylvania.

Dr. Mohler's appointment of this group of prominent figures showed the importance he attached to the assignment. It was a veritable landmark implanted on the way to present organization of the AVMA. The report was amazingly complete, consisting of an entirely new constitution and by-laws which provided for a federation of the state associations (*See, Proc.*, AVMA, 1913: 256-279), and for the "establishment of headquarters in the City of Chicago, State of Illinois, U.S.A.," which came to pass twenty years later.

The Committee's report was adopted by *vive voce* vote and was *"referred to the Executive Committee for appropriate action."* But alas and alack! We who voted yea on the floor of the meeting, believing that "appropriate action" meant putting the new constitution and by-laws into operation, were badly mistaken. To the Executive Committee, the term meant sudden death. It was at this moment that Hans Jensen coined the term "Execution Committee" and an angry voice shouted that the Association had fallen into the "hands of politicians." In short, the new basic law formulated by a competent committee was thrown aside just like that, and twenty years were to elapse before a comparable document was adopted.

The late John Blattenberg of Lima, Ohio, was my fellow traveler to and from the New York meeting. We were in high spirits over the prospects of a reorganization for which we had had high hopes for years, he in behalf of the Ohio, and I for the Illinois, association—centers of great activity in those days. The well-framed recommendations of Mohler's committee couldn't miss fire, we reckoned. On the return trip we stopped at the Merillat farm in Wayne County, Ohio, to celebrate the victory. (The Blattenberg and Merillat families were neighbors since pre-Civil War days.) We assumed that the reorganization had been effected, little suspecting what "appropriate action" meant in the hands of the Executive Committee. On arrival in Chicago a few days later, I found that D. M. Campbell, member of the Committee on Reorganization and author of a supplementary report, was of the same mind. Anyhow, our big idea of an AVMA made up of constitutent associations was to be as dead as the Madagascarian dodo through the teen decade and the next.

The reorganization was one of those basic issues in AVMA annals that incited too little concern in the general membership to mobilize effective support for them. The members *proposed* and the management *disposed*, about tells the story. This particular set-back slowed up the development of a bigger and better AVMA, plus its influence in the nation's veterinary service as a whole, right up to 1933, but it did crystallize an amorphous state of mind on the tremendously important matter of choosing executive boards more wisely. In the long run, the alleged betrayal of the membership on this occasion was invigorating. It enlivened interest in the operations of organized veterinary medicine. The state associations grew larger and the Missouri Valley association, which for some years had been drawing a larger annual attendance than the AVMA, revived its ambition to become a nation-wide society—a perfectly logical trend in view of the archaic constitution the AVMA refused to revise despite the will of the membership as expressed on the floor of a stated meeting. That this was the climax of the opposition to revision of the old basic laws of the AVMA is well shown in the published proceedings (*q.v.*)

A Dutch chemist, Mulder, coined the term protein in 1838. He derived it from a Greek verb meaning "to take the first place."

SURGERY & OBSTETRICS

AND PROBLEMS OF BREEDING

The Use of Stainless Steel Wire as a Suturing and Ligating Material in Veterinary Surgery

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Woburn, Massachusetts

THE HISTORY of sutures and ligatures is interesting. The first attempt at suturing dates back to the first crude attempts at surgery.

Suturing was a well-established art of the surgeon in the ancient civilizations of Egypt, Assyria, and Greece. Celsius, in the first century A. D., described the ligature as of ancient origin. In the middle ages, when medicine was at a low ebb, sutures were forgotten. Ambroise Paré, in the sixteenth century, was the first to introduce the ligature instead of the cautery to check hemorrhage after amputation.

Since this time many different types of sutures have been used—gold, silver, iron, steel, copper, aluminum, silk, gut, linen, cotton, horsehair, and other materials.

The attempt on the part of the surgeon to find a perfect suture material is a natural outgrowth of his desire to perform successful surgery. The success of surgery is directly proportional to the ability of the surgeon to assure perfect and rapid healing of wounds.

Wound healing is influenced by many factors: rest and immobility, general nutrition, blood supply, age of patient, blood clots, foreign bodies, infection, irritating substances, and others. Fortunately, most of these factors are associated with suturing and suture materials. Therefore, the greater number of factors controlled by the surgeon, the greater is his assurance of success. This paper deals only with those factors that are associated with the use of steel wire as a suturing and ligating material.

A suture is a fine, cordlike structure used to coapt tissues.[1] Sutures should be used in such a manner as to prevent constriction, necrosis, or damage to the part. Ligatures are threads or cords used to constrict a part and prevent leakage of blood or other fluid.

The ideal suture, according to Kraissl,[2] should be sterile, pliable, and cause no reaction. It should maintain sufficient tensile strength to approximate the tissues until they have firmly united and should be absorbed soon after its function has ceased. Haines[3] states that an ideal suture material should hold the wound edges together until the wound is healed, should not be affected by, or take part in, any untoward reaction during the healing, and should be absorbed or become innocuous shortly after the wound is healed. An ideal suture material should, therefore, have the following characteristics: (1) easily sterilized, (2) pliable, (3) no tissue reaction, (4) sufficient strength, and (5) become innocuous after healing.

The use of metal wire as a suture and ligature appears to be gaining favor with surgeons in many parts of the world. Obviously, this is because metal wire more nearly approaches the requirements of an ideal suture than other materials used today. Probably the most recent and, to all indications, the most advantageous addition to the group of metallic sutures is the rustless steel wire, an alloy of chromium and nickel. It is nonirritating, strong, flexible, and noncorrosive. Modern alloy steel has been called the "noble metal"[4] because of its resistance to chemical changes. The

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Dr. R. J. Maloney, Meadville, Pa., began the work on this phase of surgery from a veterinary standpoint in 1941.[18] Through his inspiration and excellent working background on the subject, I have carried on the remaining six years of clinical observations presented.

marked tensile strength of annealed stainless steel wire is indicated by its property of stretching over one third of its length before breaking and by the fact that it may be tied firmly in any ordinary knot with little loss in strength.

REVIEW OF THE LITERATURE

In reviewing the literature on sutures and ligatures, one is amazed at the number of articles discussing the sterilization of catgut. Further investigation reveals that herein possibly lies an outstanding weakness of catgut—the difficulty entailed in its sterilization. Clock[5] showed that catgut sutures cannot be sterilized chemically even with the use of bacteriostatic metallic silver. Metallic sutures, on the other hand, are readily sterlized by heat or by chemical means. The ease and rapidity of sterilization are distinct advantages over other suture materials. The absence of capillary action in metal also lessens the possibility of postoperative infection.

Tissue reactions commonly result from the use of catgut and other suture materials. It has been shown[6] that the allergic reactions to catgut may be due to its derivation from sheep, unremoved bacterial products, or to special toxic substances held alone or in combination.

Babcock[6] states: "From catgut buried in wounds, tissue reaction occurs with leukocytosis, infiltration, weakening, and local necrosis about the sutures. The reaction with liquefaction and removal of catgut precedes that of tissue union, and as a result healing is delayed or impaired. In peripheral nerves united by catgut, we have observed cavities of liquefaction and necrosis around the plane of union and marking the areas where catgut sutures had been inserted months before.

"In over 120 patients we have studied the reactions of the tissues to chromic and plain catgut, to silk, horse hair, dermal sutures, silver wire, and alloy steel wire have been noted. From catgut, a flare and wheal appears within twenty-four hours, characterized by zones of redness and slight swelling. This gradually increases and by the end of a week sufficient necrosis has occurred about the catgut to canalize the part, the lining of this canal being formed by granulation and necrotic tissue. The reaction is variable . . . in different individuals. Around silk, the reaction is much less marked. At the end of a week, only a faint flare and a slight swelling is observed at the points where the ends of the silk project. From silver wire and alloy steel wire there is the least reaction. Dull bluish permanent spots of argyria may appear in the skin over silver wire that has been retained for a number of weeks. Through and through sutures of alloy steel wire left in place under a plaster cast for twelve to sixteen weeks produce a hardly perceptible tissue reaction and very little scarring. The brilliant lustre of the rustless steel is retained and the tissues are not discolored. From silkworm gut, horse hair, and especially from dermal sutures the reactions are greater than from rustless steel wire, but much less than from catgut. The cutting into tissues by sutures is often due to tissue reaction as well as to tension.

"We have found so little tissue reaction to the wire that we have buried it in abdominal wounds and hernioplasties and have used it for ligatures and deep sutures in septic wounds. In reopening such wounds in stage operations, no fibrosis, local irritation, discoloration, or pus formation has been observed from the wire."

Kaufman, Johnson, and Lesser[15] report that a study of tissue reactions in dogs to the various suture materials has, in general, borne out the clinical impressions of alloy steel wire.

In a review of several articles[7-12] on the disruption of abdominal wounds, one of the outstanding features appears to be the high incidence with absorbable suture material. In addition, a peculiar increased absorptive power of tissues in some cases was mentioned by several writers as an etiologic factor in wound disrupture. The greatest percentage of wound disrupture was noted between the seventh and tenth days, just when the absorbable suture was the weakest.

In a clinical study of 36 cases of abdominal wound disruptures, Jenkins[13] found that 31 of these had been closed with chromic catgut, 4 with linen, and 1 with silk. During absorption of catgut, the foreign protein substances delayed healing and produced "edematous, friable wound surfaces which caused dangerous weakness in abdominal wounds under tension."

Preston[11] states that in two years' observations he has not seen an abdominal wound disruption where wire alone was used to close the abdominal wall. Wire sutures buried in a contaminated field do not act as a nidus for infection, as may occur when catgut or silk is employed. In grossly infected wounds, wire sutures heal in and are covered by granulation tissue without the formation of infected sinuses.

In an experimental study on rats,[14] it has been shown that the chief factors responsible for variation in tensile strength of healing skin wounds are local tissue reaction due to a kind of suture material used and modification of the blood supply to the healing wounds by the type of suturing employed. It was found that skin wounds of rats closed with annealed stainless steel wire possessed the greatest average strength and showed the least local reaction to suture material. The type of suturing which resulted in the strongest skin wounds in rats was the interrupted, loose, small bite stitch. The wounds which were found to be

the weakest had been closed with the continuous, tight, big bite stitch. The tensile strength of a healing wound indicates the degree of success that the surgeon has had in his attempt to assure rapid and perfect wound healing. It, therefore, seems logical that the surgeon should use that suture material and type of suturing that will result in the greatest tensile strength of healing wounds. From all indications at the present time, this suture material is stainless steel wire.

This paper has of necessity referred to findings of surgeons on human patients with the exceptions of the experiments of Preston,[14] and Kaufman, Johnson, and Lesser[15] in which rats and dogs were used, respectively. There was a complete absence of reports on this subject in veterinary literature as far as I was able to determine. However, the problems of the human surgeon and the veterinary surgeon are similar in essence and vary only in degree. The control of the veterinary surgeon over such factors as rest and immobility of wounds, infections, and contamination is obviously more difficult to attain. It is, therefore, all the more important for him to take advantage of any controllable factor that will assure him of greater success in his surgery as the use of steel wire suture material does seem to offer.

Technique

Stainless steel wire is available in sizes ranging from 18- to 40- (B and S) gauge. The smaller sizes, 38 and 40, are very small and possess little tensile strength. They are rarely used and are not applicable to veterinary surgery. Number 35 is about the size of a hair and has the tensile strength of 2.5 lb. Very excellent results have been attained in human surgery with this size of suture as a delicate approximating suture and as a ligature, thus replacing silk, horsehair, and dermal sutures. The medium sizes, 28 and 30, are strong and replace equal sizes of silkworm gut as through and through sutures and as buried sutures, especially in septic wounds. The 30-gauge wire has a tensile strength of about 15 lb. and it is claimed that it is a suture strong enough to support any abdominal wall incision. This, however, is necessarily dependent upon the strength of the wound edges. The larger sizes, 18 and 22, are used to hold fractured bones. Babcock states[6] that steel wire is particularly advisable in plastic surgery, colostomy, repair of cleft palates, tracheal fistula, vesicovaginal fistula, and fistula in ano, in that there is primary union after excision. Wounds of the mucous membranes heal favorably where closed with stainless steel wire as reported by Jenkins.[16] Very good results have been reported in its use in the repair of hernia, burying sizes as large as 30 and 32.

The following precautions should be taken in the use of steel wire. When applied, a square surgeon's knot is used. Hemostatic forceps should be used to exert sufficient traction to seat the knot firmly, the ends of which should be cut close to the knot to prevent trauma to the surrounding tissues. This can be done with scissors but preferably with a special wire cutter. Kinking and twisting of the wire should be avoided. Winding of the wire on spools is accomplished by rotating the spool only. Care should be taken not to prick the fingers on the sharp ends. It should be used alone. Unsatisfactory results have been obtained when used in conjunction with catgut or other suture materials.

With the foregoing history, and in the light of the amazing qualities possessed by this material, we undertook to substitute it in as many operations as possible under practical procedures on surgical cases seen in every day practice.

Eye Surgery.—My first case was a Dalmatian with a severe case of entropion, accompanied by conjunctivitis and corneal ulcerations. Having previously had the misfortune of a ruined operation due to bandage rubbing, brushing against the cage, etc., I decided on the use of the steel without a bandage. The accepted surgical procedure was used; however, I split the external canthus as the lids were uneven in size. A Stuart type stitch was used with a No. 32 steel wire. No bandage was used, and the animal was sent home the following day. At a future date the steel was removed. The recovery was uneventful. I have used it exclusively for this condition since then.

The steel material, being innocuous, can, if desired, be untouched indefinitely; however, animals as a rule are being returned for various reasons, as toenail trimming, skin conditions, etc.; therefore, I have no particular concern as to the time limit of the remaining superficial steel. Steel has no capillary, or practically no tissue, reaction, so by using sterile technique I can feel sure that the wounds will not suppurate. I have on record 1 Spitz dog that had a superficial stitch for four years, and when this stitch was removed, it was of of the same texture as when incorporated.

Fractures.—Leg wounds of dogs that are not hospitalized respond remarkably well to steel suturing. Because of the lack of irritation, the animal does not bother the bandage and within a short time healing is complete without any bandage change. I have had excellent results on compound fractures where a cast was placed over the sutured skin and left on for the duration of the healing process.

Spaying.—For the past six months, I have used steel exclusively in all spaying operations—with no postoperative bandage whatsoever for support. I have had results, excellent beyond all expectations. I have spayed females in full season, using no postoperative bandage on the abdominal incision. Although, as previously mentioned, rest and immobility to any wound are conducive to rapid healing, I feel that the general nutrition, absence of irritating substances, and rich blood supply to an area along the midline region would eliminate this contradiction because I feel that the raphe is not, in a sense, a very mobile part.

At the completion of the operation, a small amount of collodion could be used. However, I have seen favorable results without its use.

The surgeon must always remember that he is using a material whose tensile strength is the greatest of all suturing materials.

Abdominal Surgery.—On abdominal surgery of small animals, I was using a No. 32 wire which I felt was too heavy. I then changed to a No. 35 wire which gave me better results. With a simple interrupted suture including fascia, muscle, and peritoneum, I approximate the wound edges. I must warn anyone using steel that he will be dealing with a relaxed anesthetised animal, having a flaccid abdominal wall, so that when the steel is drawn to complete the knot there should be enough freedom for the box lock of a mosquito type forceps to glide under the wire comfortably. The broken skin is sutured with a simple interrupted suture; here, the utmost care must be used to avoid drawing. Therefore, I leave the same amount of slack.

The animal is then dusted with any good antiseptic powder and placed, without a bandage, in a cage. After the animal returns to consciousness, it will walk around and seldom pay attention to the wound. There is no itching, removal of tape, bandage, etc.—and within the average time first intention healing has taken place. If the animal is left for hospitalization I remove the skin sutures before it leaves. However, as said before, if it leaves the same day, I will usually see it again for some other reason, and then I can remove the steel if desired.

First intention wound healing in individual cats has given veterinarians much concern.[18] I am now using No. 35 steel exclusively for all cat spaying operations, using no postoperative bandaging, and am getting excellent results. I feel that cats resent a bandage more than other animals do and will sit in a corner and brood or fight it, whereas, with this method they are up and about in from three to four hours and rarely touch the area. The length of my incision on one abdominal hysterectomy on a cat was $2\frac{1}{2}$ to 3 in. long, removing 3 practically mature embryos. No bandage was used in this case and the results were gratifying.

I know through experience that these unbandaged abdominal wounds will heal faster and with less discomfort to the animal than the bandaged ones. Although the tensile breakage point of a square knot is great, the fact that we are working with soft structures eliminates worry about tensility. The knot should be drawn as tightly as possible remembering that steel wire will stretch one-third of its length before breaking. Using small scissors, the free ends of the wire must be cut as close to the knot as possible to make the ends painless. The knot will not "become undone" as in other type sutures.

Large Animal Surgery.—I have, in the past five years, used steel on large animals with some degree of success. It works very well in areas where there is no great tension. I have used it around the face on lacerations of eyelids, lips, nostrils, mucous membranes, etc. It is a most favorable suture material for digital neurectomies under bandage, using a No. 32 wire, with a simple interrupted type stitch. On median neurectomies we recommend a No. 32 with a Stuart type relaxing stitch.

Two months ago, a horse was brought to the hospital with a severe kick wound of the hind quarters extending along the whole course of the semimembranosis and semitendinosis muscles. The heavy fascia was lacerated badly. Because of the damage done, I decided to repair the animal using

a general intravenous type anesthesia. I used a No. 26 wire and a relaxing type stitch. The operation was prolonged due to the handling of the steel. However, before the animal recovered the work was completed. While waiting for the animal to recover, we cleaned the instruments, etc. To my disappointment, the animal on awakening made a violent thrust to arise. The steel sutures ripped through, and the condition was worse than before. With the animal in a wobbling condition, I had to restitch the wound using linen. This evidence proves that steel sutures under tension in soft structures have a cutting effect. I believe, however, that if this animal had been operated on in a standing position, and the operation done under a local anesthetic, my results would have been different.

Conclusion

In conclusion, while stainless steel wire cannot replace all other suture materials, it makes a valuable addition to the lists of suturing and ligating materials. Its remarkable qualities of strength, flexibility, noncorrosive and nonirritating properties cannot be forgotten. Its use causes almost complete absence of tissue reaction, and it can be easily and perfectly sterilized. It becomes innocuous after healing has taken place, and it is particularly valuable where it is used in infected fields as a buried suture or ligature. It can be used for almost any purpose and gives excellent results. Its use will be of great benefit to the veterinary surgeon from a perfectional and also from a practical standpoint.

At times, we must realize that we are in reality dealing with animals many of which are of low economic value.

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Hormonal Abortifacient in Bitches

To terminate pregnancy in bitches, W. K. Whitten (*Austral. Vet. J.*, June, 1947) recalls that R. K. Thompson (1939) recommended the nonspecies specific antigonadotropin produced in the blood plasma of dogs from the prolonged administration of gonadotropin from the pituitary gland of sheep. Thompson (1944) reportedly induced abortion that way in dogs in forty-eight to 100 hours without complications, even in advanced pregnancy when fetuses were born alive, and though he mentioned its use by veterinarians, no reference to that effect can be found. The Thompson reference of 1939 is *Endocrinology* (*24*: 613) and that of 1944 the American Association for the Advancement of Science. The question is "Who may have used this harmless abortifacient in the line of duty?" Its usefulness would be immense.

Anestrus in Mares.—I have found it useless to attempt hormone treatment of mares in deep anestrus, whether in or out of the breeding season. The ovaries, with their greatly reduced blood supply, are in no condition to respond to the action of rapidly excreted hormones. In the normal mare, the ovaries must contain follicles 2 to 3 cm. in diameter before estrus appears. Mares in deep anestrus must be well fed and their condition improved before any change in the reproductive organs can be expected.—*John Burkhardt, Vet. Rec., July 12, 1947.*

A Further Report on Staphylococcic Abortions in a Dairy Herd

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A PREVIOUS report[1] described observations made on 2 Holstein-Friesian cows that aborted their calves, apparently because staphylococci had invaded the uterus. This infection became somewhat of a herd problem and more information has become available.

The Cows

There were 3 more cases of abortion having manifestations similar to those described previously, namely, the presence of light grayish, tan-colored pus tinged with pink and of curdy consistency, along with necrotic areas on the attachment surfaces of the cotyledons. Two calves were dead and 1 was alive at birth.

Two of these cows had conceived to artificial insemination using the same technique and semen from the same bull as the 2 cases described previously. The third animal had conceived to a natural breeding by the same sire. Two heats previously, she had been artificially inseminated with semen from the same bull and also, in the meantime, had been bred in a natural manner by a younger bull. Termination of pregnancy occurred on the following number of days for the various animals: 220 and 230 days for the 2 cows described in the first report, and 235, 242, and 137 days for the last 3. The latter figure was the length of time the cow that was bred in a natural manner carried her calf. It is of interest to note that 228 days elapsed between the date of her abortion and the unsuccessful insemination with semen from the older bull. Semen from the same collection had been used to inseminate 2 of the cows that aborted and another sample had been used on 2 other cows, 1 of which aborted and the other of which underwent a normal parturition.

Cocci were observed in the pus from 1 animal as in the 2 previously described cases but were not visible in the pus from the other 2. A Staphylococcus was recovered from the abnormal uterine exudates or necrosed cotyledons from 2 of the 3 cows and from the lungs of the fetus expelled at 137 days. The 1 animal from which the Coccus was not recovered had been inseminated with semen from the same sample as 1 of those that aborted. These cocci resembled *Staphylococcus albus* in that colonies were porcelain-white in color and acid production from mannitol was limited or did not occur.[2] However, because of the minor differences which were noted between the various cultures, there is reason to believe that possibly more than one strain was involved. The organisms recovered from all cases produced acid from dextrose and sucrose, and most of them produced slight acid from maltose and lactose but not from salicin. Neither *Vibrio fetus* nor *Trichomonas foetus* could be found in any of the exudates, necrosed tissues, or aborted calves. Negative test results were obtained for Brucella agglutinins in all animals in the herd during several months prior to, and following, the abortions.

Difficulty was encountered in getting 3 of the cows to reconceive. Chronic endometritis and atony of the uterus persisted for several weeks in each of them. However, all responded to treatment and became pregnant to services, 2 at five months and the other at seven months after aborting. The other 2 were slaughtered without further breeding at approximately eighty days after their abortions. The genitalia of one of them appeared to be perfectly normal. There was an excess of fluid present in the uterus of the other and the condition was otherwise similar to the 3 described above. Efforts to detect the presence of, or to recover, pathogenic organisms from the genitalia of these 2 animals after slaughter were unsuccessful.

The Bulls

Semen from the 4 bulls, 2 Holstein-Friesians and 2 Jerseys, on the premises was examined between December, 1946, and April, 1947, for the presence of micro-

From the Department of Dairy Industry, Ohio Agricultural Experiment Station, Wooster (Pounden, Knoop, Krauss); from the Department of Bacteriology, Ohio State University, Columbus (Ferguson).

organisms. Culture mediums were inoculated with semen from the sire of the aborted calves on 7 occasions, and on 2 of these staphylococci were recovered which had characteristics very similar to those associated with the abortions. Staphylococci were not recovered from the semen of the two Jersey bulls on any of the 6 occasions attempted. On three of the six attempts made, semen from the second Holstein-Friesian, a 2-year-old, yielded cocci which appeared to be similar to the other organisms described. Here again the possibility exists that more than one strain was recovered from these bulls such as was mentioned in connection with cultures obtained from the cows. No recognized pathogens other than the staphylococci mentioned have been recovered from any of these 4 bulls. The manner in which the older sire had become infected is unknown. However, the means whereby the younger bull could have been exposed to infection may have been provided through his use in a natural manner on 1 of the cows that had aborted following her breeding with semen from the older sire.

Semen from 7 sires had been used during 1946 in the herd which consisted of approximately 50 cows. An additional 10 pregnancies resulted from use of semen from the sire of the aborted calves during the period in which all 5 of the cows that aborted were bred. All but 1 of these 10 animals carried their calves to full term. The exception was a heifer that gave indications of having aborted while on pasture at approximately 140 days. Thus, from a total of 15 pregnancies, 6 (37.5%) terminated in abortion. Prior to these breedings, semen from this bull had been used since his arrival in the herd on June 27, 1945, on 4 cows without untoward results, on 1 that aborted while sick from other causes, and on 2 that were temporarily infertile. The first 7 cows bred to this bull since Aug. 22, 1946, have since carried their calves to full term. A conception rate slightly in excess of 50 per cent has been maintained with semen from this bull throughout the period he has been in the herd. A change in insemination technique to one of placing the semen no further than the cervix was instituted as a precautionary measure.

DISCUSSION

Staphylococcus albus is generally considered as only a mildly pathogenic organism. Therefore, the finding of such an organism associated with a destructive condition like abortion is a sufficient reason for questioning any deduction that it was the real cause of the trouble. On the positive side may be listed the presence of cocci in the pus from 3 animals; the recovery of cultures from the expelled materials of 4 of the cows and from 2 of the aborted calves; the absence of *V. fetus* or *T. foetus;* the negative results of agglutination tests for brucellosis; the involvement in regard to the abortions of but 1 sire out of 7 used in the herd; and the recovery of apparently similar organisms from his semen.

As previously mentioned, no definite conclusion could be drawn that the placing of the semen anterior to the cervix assisted the organisms to gain entrance to the uterus. However, such a deduction receives support from the fact that the cervix with its viscid mucus of comparatively high pH[3] is one of the few locations in the genital tract that appears to be designed for protecting the principal organs against penetration by pathogenic bacteria.

SUMMARY

Five abortions, 2 of which were described in a previous report, occurred in a herd of 50 cows. The expulsions were accompanied by quantities of light grayish, tan-colored pus tinged with pink. Necrosis of the cotyledons was noticeable in all cases. All 5 animals had been inseminated anterior to the cervix with semen obtained from the same bull which was 1 of 7 used in the herd during the year. During a seven-month period, 6 (37.5%) of the 15 pregnancies resulting from use of this bull terminated in abortion.

An organism resembling *Staphylococcus albus* was recovered from the necrosed cotyledons or pus in 4 instances and from 2 of the aborted calves. Organisms of apparently similar characteristics were recovered from semen samples obtained from the bull concerned.

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CLINICAL DATA

Clinical Notes

The conventional type of barn contributes materially to the high incidence of bovine mastitis.

A quarter of a million Brucella-infected cows produce milk which is consumed raw in the United States.—*B. T. Simms, Washington, D. C.*

Instruments will not rust if, after being used and cleaned, they are rinsed off in a soap suds solution and permitted to dry instead of being wiped.—*Fort Dodge Bio-Chemic Review.*

There are indications that streptomycin may be effective in the local treatment of certain eye infections, such as chronic conjunctivitis.

Poultry-Disease Control.—I like to think of disease control as "cash register" sanitation. There should be as much planning and directing in disease control as in breeding or housing or feeding. . . . The basis of profitable disease control is good breeding, adequate feeding, and intelligent management.—*Cliff D. Carpenter in U. S. Egg and Poultry Magazine.*

Chaulmoogra Oil in Arthritis.—Based upon benefits derived from the chaulmoogra oil in pellagra cases complicated with hypertrophic arthritis, the results obtained in 350 cases of various types of arthritis are described as "truly astonishing." In view of the prevalence of hypertrophic arthritis of unknown cause in horses, this chemotherapy is, at least, interesting.

The use of tyrothricin to purify smallpox vaccine suggests its use in that rôle for other virus vaccines capable of containing bacterial contaminants. The laboratory technique (*J. Am. M. A.*, Sept. 6, 1947) was developed by the virus division of Oswaldo Cruz Institute, Rio de Janeiro.

Federal studies indicate that penicillin has no application in the preservation of food.

A pig well born is a pig half weaned—the 1½-lb. pig is a poor risk; the pig that weighs 2½ lb. at birth is an excellent risk. —*J. S. Koen, Storm Lake, Iowa.*

Transitory drowsiness is a side effect of benadryl therapy that can be overcome by reducing the dosage slightly and administering stimulants.—*J. Am. Pharm. A.*

Strain 19 Immunity.—Strain 19, says Dr. A. B. Crawford of U.S. BAI, Beltsville, immunizes about 80 per cent of the animals vaccinated for about four years, and prevents abortion in 95 per cent of them for that length of time.

Mastitis Leaves Its Mark.—We have yet to find a quarter that has been affected with acute mastitis, regardless of how well it responded to treatment, in which the milk returned to its normal level. It is always higher in cell count and in chloride, and lower in milk sugar. Moreover, reinfection is common, generally by an organism different from that which caused the original infection.—*Dr. W. E. Petersen before The American Guernsey Cattle Club.*

Brucellosis Among Rural People.—W. W. Spink, M.D., University of Minnesota (*Hoard's Dairyman*, July 10, 1947), in a report on brucellosis in rural areas observed that children and some adults contract active brucellosis by drinking raw milk of infected herds. Another major portal for Brucella was abrasions in the skin suffered by farmers, veterinarians, and stockyard employees who handle animals and animal tissues, raw milk, and contaminated material. The latter source is the more difficult to overcome.

An Infestation in Domestic Turkeys with Intestinal Flukes

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THE FLUKES found in the turkeys in this report fall within the descriptive limits of *Echinostomum revolutum* as reported by Beaver.[1]

History—On Aug. 14, 1946, a turkey grower brought 2 live 5-month-old turkeys to the diagnosis laboratory. The flock contained 670 turkeys. Hatchability and livability as poults were reported as satisfactory. Diarrhea was common, and the entire flock appeared unthrifty. One death occurred recently, about 6 per cent of the flock was noticeably sick, and another 20 per cent were not consuming their usual amount of feed.

The birds were provided with a good balanced ration and there had been no change of feed prior to the onset of the condition. The birds were kept on an alfalfa range that included a low marsh area with a few high spots of land. An unusually rainy season increased the difficulty of maintaining a satisfactory range. The turkey flock had been on this range since early summer. In addition, during early summer, there were several small temporary ponds on the range that were from 50 to 150 ft. in diameter.

Review of Literature

In 1920, Johnson[2] investigated the life cycle of *E. revolutum* by using the domestic fowl. The identification of several closely related flukes of the family Echinostomidae was critically reviewed not only experimentally, but taxonomically as well, by Beaver[1] in 1937 with the result that eight previously described species were shown to be identical and eight others as probably the same or species of dubious classification.

A review of the available literature disclosed only one report by Skrjabin of the parasite being found in turkeys in Russia.[3]

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Research fellows (Kitchell and Sautter), Division of Veterinary Medicine; and research fellow (Cass), Division of Entomology, University Farm, St. Paul, Minn.

The authors express their gratitude to Drs. R. Fenstermacher and Benjamin Pomeroy for their guidance and criticism.

The fluke is universally present, and has been reported as being found in every temperate region in the world with the exception of South Africa and inland China. Infestations have been found in 35 species of animals. Among the latter are turkeys, pigeons, domestic fowl, several species of wild duck, muskrats, and one report of human infestation is recorded.[1]

Description of Fluke and Life History

Echinostomum revolutum is an elongate, somewhat flattened trematode with a ventral and oral sucker. It is characterized by a cuticular, kidney-shaped expansion, a collar, around the oral sucker that has a row of 37 strong spines. It varies as an adult in size from 4 to 30 mm. in length, differing in the various hosts. Those found in the turkey were from 5 to 6 mm. long. The genitalia were not developed in the smaller flukes (3 to 4 mm.) (fig. 1). Most of the flukes recovered from the birds in this case were sexually immature.

The life cycle of the parasite is as follows: Ova are deposited in the large intestine, pass out with the droppings, and are washed by rains into low wet areas where they hatch in about three weeks into small water living miracidia. These swim about very actively, at random, until they either die or penetrate the foot of a snail and later penetrate the internal organs, after which they develop further as a mother redia, and a generation of rediae in which cercariae develop. The cercariae may either encyst without escaping from the snail, or after escaping may encyst in another snail or in a tadpole.

A turkey or chicken becomes infested by eating snails, or tadpoles containing cysts. Experimental studies indicate that fluke eggs begin to appear in the feces of chickens about twelve days after infestation with fluke cysts.[2]

Symptoms.—The birds exhibited marked depression. The feathers around the vent were soiled and the turkeys had a diarrhea which had an unusual, light brown color. Differential blood counts failed to show any significant variations.

Postmortem Examination.—At autopsy, all turkeys were found dehydrated. The lower colon, rectum, and portions of the cecums were considerably enlarged and congested, the intestinal wall thickened, and the intestinal serosa had lost its normal luster. Upon exposing the intestinal contents, a marked agitation was noted.

Closer examination of the intestinal mucosa revealed a thick, granular, slimy gray exudate and by immersing the opened intestine in water many flukes were observed. Approximately 200 flukes were recovered from the intestinal tract of the 4 birds at autopsy.

Bacteriology and Pathology.—Bacteriologic cultures of the spleen, liver, and heart's blood on dextrose-starch agar gave negative results. The intestinal contents were cultured in Selenite-F (Difco) and were incubated twenty-four hours and then were plated on S. S. agar plates (Difco). Incubation of these plates revealed no organisms present capable of producing disease.

Histopathologic studies of the various tissues revealed only the presence of a diphtheritic enteritis in the involved portion of the intestine. The mucosa and submucosa were densely packed with neutrophils, eosinophils, and monocytes. The liver, spleen, and kidneys did not show any significant pathologic changes.

Treatment.—An attempt was made to stop further infestations by moving the flock to higher ground, and thus prevent the birds feeding on infested snails. When it was evident that preventing the ingestion of infested snails would not prevent further death loss, the authors decided to use a drug treatment on the clinical cases to eliminate the flukes from the intestines. Since carbon tetrachloride is one of the more successful drugs in the treatment of human infestation with the intestinal fluke, *Fasciolopsis buskii,* it was used in this case. Monnig also recommends the use of carbon tetrachloride or tetrachlorethylene 1 to 2 cc. in 3 cc. of liquid paraffin with a syringe and 10-cm. tube into the esophagus.[4] Twelve of the weakest birds were selected and 7 cc. of the drug was administered *per rectum* to each bird by use of a rubber hose attached to a glass syringe. Two of the treated birds died during the first night. No apparent change was noted in the remaining birds on the following day. Two days later they regained their appetite

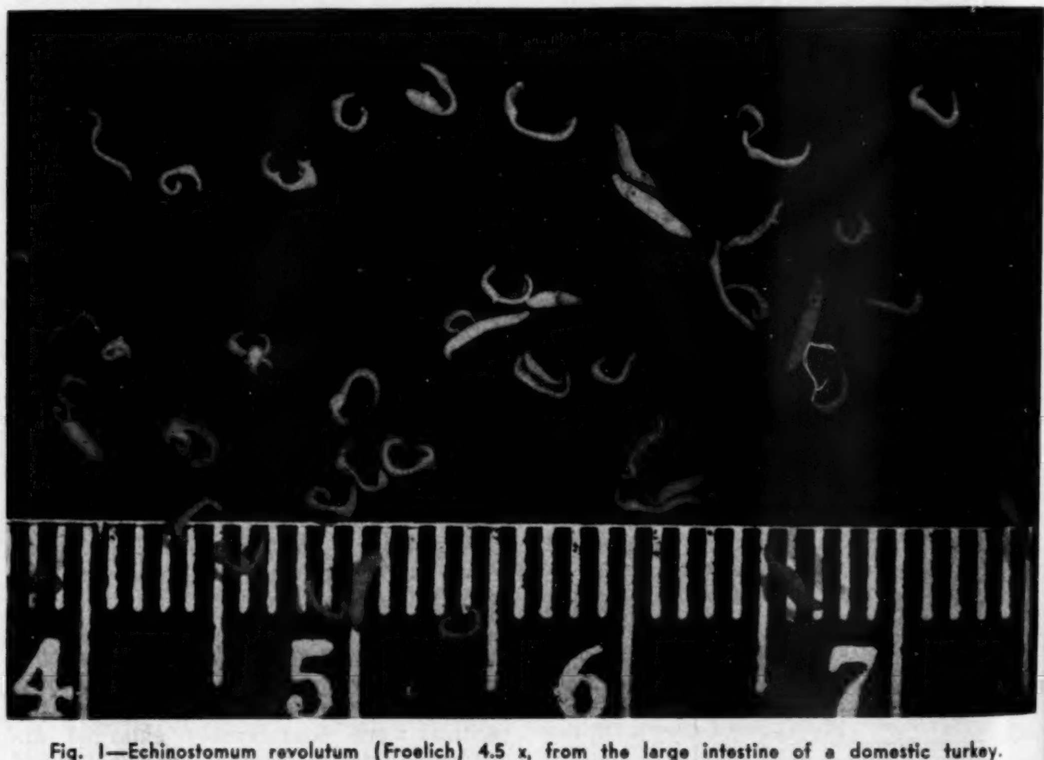

Fig. 1—Echinostomum revolutum (Froelich) 4.5 x, from the large intestine of a domestic turkey. Note: (a) the opening in the ventral sucker in the second worm above the 6.6-cm. mark; (b) the lateral view of the worm just above the 6-cm. mark; the oral end is at the left; (c) the ventral suckers close to the anterior end and collars around the oral sucker of the 2 worms above the 6-cm. mark near the top of the picture. The measure is a centimeter rule.

and were apparently recovering from the infestation. Two of the treated birds were examined at autopsy a week after treatment. No flukes were found in the intestinal tract. However, lesions in the intestinal tract were similar to those observed in the other specimens examined earlier.

EXPERIMENTAL

At the time of this study the temporary ponds on the turkey range had dried up, and only shells of dead snails *Helisoma trivolvis* could be found. This species of snail is the one most commonly reported in the United States as infested with the intermediate forms of *E. revolutum*.

Fluke cysts, showing characteristics of the family to which the fluke under discussion belongs, were found in snails (Stagnicola sp. and *Helisoma trivolvis*) in a pond about a quarter mile distant from the affected range. One hundred of these cysts were fed to each of 2 turkey poults. Two other poults were fed whole, live infested snails. No flukes were recovered from any of the birds. At a later date, some live snails (*H. trivolvis*) were collected from the range suspected of harboring the infestation. They contained encysted flukes resembling those of the same fluke family. These cysts were not used in experimental feeding trials.

GENERAL DISCUSSION

The fluke, *E. revolutum*, is a common inhabitant of the intestinal tract of many wild ducks. Since the marshy areas on this farm were frequented by wild ducks, it is highly probable that fluke infestation in the snails resulted from contamination of these waters by droppings from the wild ducks.

It is to be noted that a range which combines conditions necessary for transmission of these flukes to turkeys must include low, wet areas; must be frequented by wild waterfowl, or muskrats; and must be inhabited by suitable fresh-water mollusks.

Simple draining presents the possibility of exposing birds to a supply of snails for food. Since snails resist drying for a period of time, and the metacercariae remain alive for a short period of time in the snails, the very purpose for which the drainage was undertaken is defeated.

The observation of a clinical infestation such as has occurred on this farm where conditions were conducive to a heavy infestation suggests the speculation as to the existence of subclinical infestations on other farms. The parasite is not easily noticed with the unaided eye when mixed with masses of intestinal content, and one may easily fail to observe its presence when routine autopsies are performed. However, the disease in the subclinical form could cause significant financial loss through reduced feed consumption and subsequent loss of weight.

Control.—The incidence of the fluke *E. revolutum* in turkeys or domestic fowl can be controlled by:

1) Preventing the birds from ranging on low, wet areas.

2) Exterminating the snails which are an indispensable part in the life cycle of the fluke. In small, swampy areas chemical agents such as copper sulfate (0.5 p.p.m.) or unslaked lime, CaO (0.1%), may be distributed evenly over the water for this purpose.

3) Treating the clinical cases with drugs to eliminate the flukes from the intestines, as noted under "Treatment."

SUMMARY

1) A case of infestation with *Echinostomum revolutum* (Froelich) (Trematoda: Echinostomidae) in a flock of turkeys is reported.

2) A brief review of the principal stages in the life cycle of *E. revolutum* is presented. The snail *Helisoma trivolvis* is implicated in this case.

3) The history and symptoms were not remarkable and therefore could be easily confused with other conditions. The lesion accompanying the infestation was an enteritis which resulted in diarrhea, dehydration and, in some affected individuals, death.

4) Preliminary trials by feeding turkeys infested snails and metacercariae gave negative results.

5) Carbon tetrachloride was used as an anthelmintic in the treatment.

6) Recommendations for control are presented.

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The Eradication of Tuberculosis from Poultry and Swine

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WHILE the United States has virtually eliminated tuberculosis from cattle through the coöperation of all in the industry, there is still much to be done to free poultry and swine from this disease. If the avian type, so widely prevalent in poultry, could be readily transmitted to cattle, such progress could not have been made. There are a few cases where cattle have become sensitized by ingesting the avian germs and have reacted temporarily, but they did not show lesions when slaughtered and really did not have the disease. Cattle rarely contract tuberculosis from people, and people seldom get the disease from poultry, though avian germs have been found in human glands.

Hogs Easy Victims.—Hogs are very susceptible to all three types—bovine, avian, and human. As would be expected, the elimination of tuberculosis in cattle has greatly reduced condemnations in hogs—to be exact, 87 per cent since 1917. That year 76,807 hogs were condemned as inedible under federal inspection, enough to fill a stock train 9 miles long. While there were only 10,514 hog carcasses condemned in 1946, 3,264,984 (7.6% of the total slaughter) showed lesions, mostly in the throat glands, causing many heads to be condemned. As there is now almost no exposure to hogs from the milk or droppings of cattle, and relatively little from people, it may be safely assumed that at least 95 per cent of the tuberculosis in hogs is of the avian type, contracted from the droppings of poultry or from eating chickens that died of tuberculosis.

Tuberculin Tests Revealing.—Tests applied to poultry in the north central states indicate that at least 50 per cent of the chicken flocks are infected to a greater or lesser degree. This is hard to realize because so few infected birds show external symptoms such as pale combs, thin breasts, and occasionally lameness. Internal examination shows spots on the liver and spleen and nodules on the intestines.

Most Prevalent in North Central States.—There is very little tuberculosis in either poultry or swine in the east and west coast states because commercial egg producers make a general practice of disposing of all hens at the end of the first laying year for greater profits. On the larger farms in the Middlewest, poultry is secondary to cattle and hogs and less attention is given to economies in egg production. If flock owners in this area could know that trapnest records in many states indicate that hens lay, on the average, 30 per cent more eggs their first year of production than the same hens lay the second year under equal conditions, and that it is the older birds that have so much tuberculosis, the present trend toward all-pullet flocks would be greatly accelerated.

TESTING POULTRY AND SWINE IN ILLINOIS

To get a true picture of conditions in Illinois, Dr. W. C. Logan of the U. S. Bureau of Animal Industry has been applying the tuberculin test to both poultry and swine, as this is the only way it can be detected in either unless a very advanced stage has been reached. The results are striking.

From July 1, 1946, to May 1, 1947, Dr. Logan tuberculin-tested entire flocks of chickens in one southern, seven central, and three northern Illinois counties. Of 524 mixed flocks containing old and young birds, 342 (65.2%) disclosed 1 or more reactors and were classified as infected flocks. Of 88,270 birds in these mixed flocks tested, 6,781 (7.7%) reacted. The significant thing is that out of a total of 25,505 birds in all-pullet flocks, only 101 (0.4%) reacted. In most cases where reactors were found in all-pullet flocks, the practice of disposing of all birds at the end of the first laying year was only recently started. Dr. Logan killed several reactors, and lesions of tuberculosis were detected in each.

Brood sows on many farms where the poultry was infected were tuberculin-tested. On practically all farms some pigs reacted. Dr. Logan tested 265 swine herds and found reactors in 89 (33.5%). Out of 1,878 brood sows in these herds, 219 (11.6%) reacted. Dr. Logan writes:

> I do not find avian tuberculosis in swine on farms where tuberculosis is not found in the chickens, excepting the cases where the reactor

hog had been purchased, having originated on another farm. As often as possible such source of infection is traced and in each of such instances other hogs and the poultry were found to be infected when tested. Only in one sow on one farm have I found a reactor which had been raised on this particular farm and no infection found in the chickens tested on the farm. On this farm the dairy herd was under quarantine for tuberculosis and was in the process of retest the same week I tested and found the reactor sow. The veterinarian applying the test advised me that the herd passed a clean test at that particular time. However, it was or had been an infected herd of cattle.

Iowa Testing

Reports recently received on poultry testing in one southern, one central, and two northern Iowa counties under the direction of Dr. J. A. Barger, veterinarian in charge, U. S. Bureau of Animal Industry, and Dr. C. C. Frank, Iowa Department of Agriculture, show that of 98 mixed flocks containing old and young birds, 58 flocks (59.1%) disclosed reactors, and out of 20,440 individual birds in these mixed flocks, 703 (3.4%) reacted. Of 12,398 birds less than 18 months old in the all-pullet flocks tested, only 59 (0.4%) reacted. In 1936, of 11,500 hens over 18 months old tested in three Iowa counties, 16.8 per cent reacted.

As a result of a vigorous campaign by the Poultry Department of Iowa State College, the Extension Division, state and federal agencies, and others in Iowa to encourage the maintenance of all-pullet flocks not only to eliminate tuberculosis but also to get more eggs from feed consumed, the percentage of Iowa hogs retained for tuberculosis under federal inspection has decreased from 11.7 per cent in 1941 to 6.9 per cent in 1947.

In both Illinois and Iowa, the percentage of tuberculous chickens was found to be higher in the northern counties. The percentage of hogs retained for tuberculosis is still higher in the states farther north, and presumably the incidence of the disease in poultry is higher there. Climate is a factor though Maine in the same latitude has but little tuberculosis in poultry and swine because the prevailing practice there has been, and still is, to keep all-pullet flocks.

It would be impossible to apply the tuberculin test to all poultry as was done with cattle. There are not enough veterinarians for this, nor is it necessary. If the 90 per cent of the flocks that produce eggs exclusively for food purposes were all-pullet flocks, and the relatively few valuable breeding flocks — many of which should be kept for additional laying years—could be tuberculin-tested annually, there would be very little tuberculosis in either poultry or swine. If there are insufficient veterinarians to test the breeding flocks, the next best thing is to make a practice of confining the older flock the year round, entirely apart from the young flock and from the hogs on the premises.

It is of the utmost importance to rid the nation of all forms of tuberculosis, and it can be done.

Sulfonamide Treatment of Foul Brood First Tested in 1942

An item in the September, 1947, JOURNAL (p. 195) called attention to the value of sulfathiazole in treating American foul brood of bees, as demonstrated by Dr. Peter Johnson of the Storrs experiment station, but neglected to mention that the earliest recorded work on sulfathiazole in foul brood was done at the Missouri experiment station. Tests were started in the spring of 1942 at the station apiary in Columbia, Mo., by Prof. L. Haseman with the assistance of Mr. L. F. Childers, a local beekeeper, whose published report appeared in October, 1944, as bulletin 482 of the Missouri station ("Controlling American Foulbrood with Sulfa Drugs"). In that document the authors stated that if all beekeepers would feed sulfathiazole in sugar syrup and in pollen substitute routinely in the fall and spring, "we might safely expect to control American foulbrood, and possibly Nosema, fully as well as we now control hog cholera."

New Morphine Substitute

A synthetic drug named amidone, dolophine, or just 10820, is pronounced two to four times more analgesic than morphine. It was first made by I. G. Farbenindustrie in Germany during the war. Its existence was discovered by the U.S. Army Medical Corps in 1945 but has been kept secret in fear that some of it would find itself on the market before its distribution can be controlled by the Bureau of Narcotics. Amidone is habit-forming. Like demerol, it will take an act of Congress to bring it under control.

Epithelioma of the Eye ("Cancer Eye") in Cattle Cause for Carcass Condemnation

Recently, a livestock shipper complained to a packing company because one of his cattle had been condemned on antemortem inspection for "cancer eye;" he reported that his local veterinarians said such antemortem condemnation must be a mistake.

Such incidents are not unusual. Since veterinarians and stock owners generally may not be aware that beef animals with pronounced epithelioma of the eye are subject to condemnation, usually on antemortem veterinary inspection, it may be well to call attention to the regulations of the federal meat inspection service, because salvage slaughter of affected animals may be decided upon by a cattle grower or recommended by his veterinarian.

Fig. 1—Epithelioma of the eye in animal received at one of the stockyards.

According to "Regulations Governing the Meat Inspection of the U. S. Department of Agriculture" (January, 1947, edition), any beef animal found on antemortem inspection to be affected with epithelioma of the eye and of the orbital region in which the eye has been destroyed or obscured by neoplastic tissue and which shows extensive infection, suppuration, and necrosis, accompanied with a foul odor, or any animal so affected, regardless of extent, that there is an accompanying cachexia, must be disposed of. Such condemned animals may not be taken into a federally inspected plant to be slaughtered or dressed but must be disposed of and tanked.

In the case of cattle affected with cancer eye to a lesser extent than indicated above, the regulations provide that they shall be marked "U. S. suspect" and disposed of accordingly. In such instances, even though eligible for slaughter and postmortem inspection, the carcasses must be condemned in their *entirety* under any of the following conditions: (1) if the affection has involved the osseous structures of the head with extensive infection, suppuration, and necrosis; (2) if there is metastasis from the eye, orbital region or corresponding parotid lymph gland to other lymph glands, internal organs, etc., regardless of extent of the primary tumor; or (3) if the affection, regardless of extent, is associated with cachexia or evidence of absorption or secondary changes.

—*J. S. Bengston.*

Fig. 2—An advanced stage of epithelioma of the eye in stockyards animal.

Carcasses of cattle affected to a lesser extent than indicated in the preceding paragraph may be passed for food after removal and condemnation of the head, including the tongue, provided the carcass is otherwise in good condition. Usually, cattle showing epithelioma of the eye at federally inspected establishments are affected to such an extent that condemnation on antemortem inspection is necessary.

The accompanying photographs of actual cases of cancer eye found at stockyards are sufficient evidence to explain why.

Consideration of epithelioma of the eye in cattle as a possible cause for carcass condemnation goes back nearly ten years when Dr. J. S. Bengston, now in charge of the BAI Branch Pathological Laboratory, Chicago, Ill., discussed the subject before the Conference on Federal Meat Inspection Service in Chicago on June 6-7, 1938. In his paper, Dr. Bengston pointed out that cancer eye in cattle is a malignant carcinomatous, new growth, which readily becomes infected, suppurative, necrotic, and rather rapidly invades and destroys surrounding tissues, including the osseous structures. The parotid lymph gland is usually affected by metastatic tumor formation and eventually there is a possibility of systemic invasion, including actual metastatic carcinoma of the skull bones. The suppurating, necrotic growths in the orbital region have a foul and penetrating odor and in warm weather are almost invariably invaded by maggots.

Pericarditis with Pleural Extension

On Sept. 2, 1947, a fat, unspayed 7-year-old Cocker Spaniel was presented with a history of breathlessness for two days. Her breathing was shallow and fast; temperature 105.5 F.; pain in heart region; and dullness on auscultation. A tentative diagnosis of pericarditis with pleural extension was made and she was given 150,000 units of penicillin in oil and wax. Another 150,000 units was given that evening, with 250 cc. of dextrose, an enema, and 2 cc. of gum camphor. As the temperature was unchanged the next day, 200,000 units of penicillin in saline divided into four doses three hours apart was administered. Dextrose was also given and a urinalysis was made which showed gross albuminuria. Buchuform was added to the treatment. She was eating during this time. Next day she showed anxiety; the temperature was down to 102.2 F. On the following day she was again catheterized and about two cups of creamy pus withdrawn from the bladder. No further change was noted. The animal resumed eating and temperature dropped to 99.2 F. on September 8.

A fluoroscopic examination was made which showed two areas of an opaqueness similar to a barium picture. One of these was located in the bladder area and the other, about 3 in. in diameter, apparently in front of the heart. Nevertheless, we tapped the pericardium but obtained only about 1 cc. of normal fluid.

She was discharged and buchuform and digitalis dispensed. Abdominal tenderness was noted only on the day pus was obtained. The reason for opaqueness of the two regions remains obscure. As of September 25, she is apparently normal.—*D. E. Ward, D.V.M., Santa Ana, Calif.*

Equine Brucellosis

Ammann and Hess (*Schweiz. Arch. f. Tierheilk., 88,* 1946:285) write their views on equine brucellosis, especially of its surgical localization: bursae of the poll, withers, tendon sheaths, and their muscular perimeters in which *Brucella abortus* plays an etiological rôle. The symptoms are those of bursitis, with greater tendency to become fistulous than purely traumatic injury. As a rule, the subjects have been in contact with cattle affected with brucellosis and react to the sero-agglutination test. Reaction at 1:160 has been regarded as positive evidence of a Brucella origin. Except for such trust as can be placed in vaccination, there is no useful treatment. Simple incision only adds secondary infections, and vigorous curettage and extirpation of necrotic structures belong to the technique of surgery.—*Abstr. Rec. Vét. Méd. d'Alfort, 123, (Feb., 1947): 72.*

Swine Brucellosis a "Must Control" Disease

Estimates of the American Foundation of Animal Health to the effect that 20 per cent of the swine herds of the country are affected with brucellosis, plus the fact that it is the type of brucellosis most dangerous to man, places a great responsibility upon the swine breeders and the livestock sanitary services which beg systematic attack. Dr. C. D. Grinnells, of the North Carolina Agricultural Experiment Station *(Hoard's Dairyman,* Apr. 25, 1947: 369), cautions the public that the swine infection is as dangerous for man as for animals, and that when it strikes a human being the attack is severe and lingering.

The Toxic Principle of the Species Aleurites

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THE TUNG TREE (Aleurites spp.) is a native of China and was introduced into the United States in 1905 in an attempt to establish a domestic supply of tung oil, which is superior to most oils in drying and waterproofing qualities. The dry tung seed contains 20 to 30 per cent of oil which commercially is expressed by pressure.

Emmel, Sanders, and Swanson[1] have reported on the toxicity of the foliage of *Aleurites fordi* Hemsl. for cattle. It has been agreed generally among investigators that tung meal (ground "pressed cake," the residue from extracting mills) is toxic when fed to animals. Numerous unsuccessful attempts to detoxify tung meal have been reported. Emmel[2] reported the isolation of a toxic saponin from the foliage of *A. fordi*. The work reported herein was conducted to investigate the toxic principle of the tung species.

It was found that saponin, a toxic substance, could be isolated from the foliage as well as from commercial tung meal of *A. fordi*, the species grown commercially on approximately 200,000 acres in the Gulf Coast states. In addition to positive chemical tests, prepared extracts foamed markedly when agitated with water, were nondialyzable or at least incompletely so, were water-soluble, were precipitated by saturation with ammonium sulfate, and induced extreme gastrointestinal irritation when fed to rabbits, all of which are characteristic of a toxic saponin.

Saponin also was isolated from the foliage of three tung species introduced in experimental plantings, *Aleurites montana* (Lour.) Wils., *Aleurites moluccana* Willd. (*Aleurites triloba* Forst.), and *Aleurites trisperma* Blanco. Experimental feeding of definite amounts of foliage to mature chickens and a study of the resulting lesions indicated that *A. montana* was approximately one-half as toxic as *A. fordi* while the remaining two species were increasingly less toxic than *A. montana* in the order named.

Experiments were conducted to compare the saponin content of commercial tung meal with that of fresh tung kernels. By extraction, hydrolysis, and subsequent quantitative sugar tests, it was found that tung kernels (*A. fordi*) contained approximately six times more saponin than commercial tung meal. Thus a considerable portion of the saponin content is lost in the milling process.

It was found that the saponin content of tung meal could be destroyed best by hydrolysis (600 cc. of 5% aqueous hydrochloric acid was added to 1 liter of meal, allowed to stand for thirty minutes, then heated in an autoclave at 15 lb. pressure for thirty minutes.) Hydrolyzed, freshly milled tung meal was more toxic than hydrolyzed meal at least six months of age. Repeated experiments indicated that freshly milled meals gradually became less toxic during five months of storage under good conditions; stored longer, no decreased toxicity was noted.

This led to the isolation of a second toxic principle, as yet unidentified, from tung meal. This principle can be extracted with ninety-five per cent ethyl alcohol in a Soxhlet extractor. The alcohol extract, while hot, was filtered through filter paper and stored in the refrigerator until clear. The clear extract was evaporated to a thick, syrupy mass. Three volumes of acetone were added and the liquid was allowed to boil for five minutes. It was then filtered while hot and stored in the refrigerator until it became clear. The clear extract caused the death of 50 per cent of the chicks to which it was fed in an amount equivalent to 20 per cent of commercial tung meal in the ration for a two-week period; the chicks were 4 to 6 days of age when placed on feeding tests. The feeding of this second toxic substance at the same rate to chicks 4 to 6 weeks of age resulted in retarded growth, but no deaths occurred. Similar results occurred when the second toxic principle was isolated from fresh tung kernels by similar methods.

Some investigators have concluded that oil-free tung meal is not toxic upon the premise that the 5 per cent residual oil

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in the commercially milled product contains the toxic principle. In these experiments it was found that tung meal extracted until oil-free with ether, acetone, naphtha, and hexane was toxic. Heat reduced the toxicity of tung meal in proportion to the length of the period over which it was exposed; however, meal heated for four hours in an autoclave at 15-lb. pressure was toxic.

In these experiments commercial tung meal was detoxified completely by extraction with 95 per cent ethyl alcohol to remove the second toxic principle and hydrolysis to destroy the saponin content. In seven trials a total of 92 chicks fed a ration consisting of 20 per cent of detoxified meal gained an average of 52.58 Gm. during a two-week feeding period as compared with an average gain of 52.77 Gm. in chicks which received no tung meal. A total of 43 chicks in three trials gained an average of 81.49 Gm. during a two-week feeding period in which an amount of detoxified tung kernel flakes equivalent to 20 per cent of tung meal was included in the ration, while an equal number of chicks which received no tung kernel flakes gained an average of 82.47 Gm. during a similar period. The trials were started when the chicks were 4 to 8 days old. When the detoxified meal was fed to chicks 2 weeks of age for the subsequent five-week period at the rate of 20 per cent of the ration, the average gains were comparable to those made by control chicks which received no tung meal.

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Bougie Treatment of Bovine Mastitis

In lieu of medicated infusions for the treatment of mastitis of cows, the Martin Laboratories, West Chester, Pa., manufacture a teat bougie medicated with penicillin which requires no instrumentation. The bougie is simply slipped into the teat canal to disintegrate in the milk and disseminate to, and beyond, the milk cistern. The bougie is sold under the trade name of Mastics. After a development period of over two years, Dr. F. E. Martin (UP '33), practitioner of West Chester, vouches for the merits of the treatment.

Nitrogen Mustards Therapy

Veterinarians of World War I, who had occasion to note the grievous effects of mustard gas (dichloride-ethyl-sulfide) on horses operating near the front lines, will be interested in knowing that these compounds are being reported to give dramatic results in the treatment of neoplastic diseases of man. (*J.Am.M.A.*, Sept. 13, 1947.) It will be recalled that the destructive action was attributed to intracellular liberation of hydrochloric acid. The diseases which are reportedly responding to the careful use of these sulfur mustards are lymphadenoma (Hodgkin's disease), lymphosarcoma, myeloma, and chronic leucemia. While the drug has a narrow margin of safety, the blood picture exhibits the results of toxic dosing.

The importance of this new chemotherapy is the possible benefit that might be derived in lymphadenitis of cattle and dogs, and particularly leucemia (range paralysis) of fowl. Of course, this is just an armchair hint. The action on neoplastic cells is said to resemble that of x-rays.

Outbreak of Swine Erysipelas in an Aviary

Prof. Achille Urbain (*Bull. d. l'Acad. Vét. 20*, May, 1947: 201-203) describes a serious epizoötic of *Erysipelothrix rhusiopathiae* infection in the bird house of the Museum of Natural History, Paris. Of the 30 birds stricken, there were turtle doves, parakeets, black birds, green finches, gold finches, and charfinches, 10 of which died in twelve to twenty-four hours, and 8 in four to six days. The symptoms were deep prostration, dyspnea, and more or less diarrhea, together with pronounced generalized congestion of all the organs postmortem, especially of the crop, gizzard, intestines, and endocardium. The bacteriologic studies by which the specific organism was identified are described in detail.

An interesting historical fact brought out in the discussion of this communication is that the resistance of pigeons to swine erysipelas was discovered in 1899 by the laboratory of the livestock market at Villette-Bestiaux.

Rabies is the most agonizing torture known to man, and man, in general, stands by watching.

Chronic Interstitial Pneumonia

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BENBROOK[1] has stressed the value of necropsies in veterinary medicine. There is no doubt that the time spent in conducting postmortem investigations will amply repay any practitioner. We have found it that way in our practice.

On March 12, 1947, a female Dachshund about 3 years old was presented for examination. The animal was cachectic, dehydrated, emaciated, and very weak in the hind legs. Various groups of muscles twitched spasmodically. The conjunctiva was muddy looking and congested. The mouth emitted a fetid odor. The mucosa of the lips was ulcerated. A slight cough was present, which was not easily induced. The temperature was 96 F. Respirations were slow and shallow. The pulse was weak and thready. Frictional sounds and a few râles were heard on auscultation of the lungs.

The owner related the following story. About four days previously the dog had gone into the cellar and eaten a large number of potatoes stored there. Since that time she had refused to eat and had lost her vitality.

The history presented very little aid for diagnosis. The symptoms corresponded very nicely with those of canine leptospirosis as described by Witter,[2] Coffin and Stubbs,[3] Riser,[4] and others. The dog appeared moribund and euthanasia was suggested.

Euthanasia was performed by injecting pentobarbital sodium intravenously as suggested by Schnelle.[5]

On necropsy the following were found. The kidneys appeared congested. Their capsules came away easily. The liver was normal. The adrenals appeared to be cystic. The lungs were hepatized and a fibrinous pleuritis was present. A slight catarrhal enteritis, tarlike feces, and a few tapeworm segments were found in the intestines.

Tissues were sent to the Army Institute of Pathology for study and diagnosis.

The following was learned from the report of Major T. C. Jones. No significant lesions were recognized in the liver and intestines. In the kidneys, no interstitial nephritis was present, and no leptospira were visible in the tissues prepared with special silver stains. Glomerular nephritis was present. The adrenal cortex was quite narrow and the medulla relatively large. In the cells of the zona arcuata, there were many vacuoles. Lesions in the spleen were not significant. The lung presented a picture of chronic interstitial pneumonia.

The entire section (of the lung) examined contained few intact alveoli, most of it being consolidated or collapsed. The alveolar walls are quite thick and contain hyaline material. In some places these alveoli are lined with large cuboidal epithelial cells which are sometimes arranged in multiple (pseudostratified) layers. In many places the cells are detached from the alveolar wall and lie free in the lumen as multinuclear giant cells. Many alveoli are filled with large epithelial cells with foamy cytoplasm. Neutrophils and cell débris are numerous and a few necrotic foci are seen. A thorough search failed to reveal inclusion bodies of canine distemper. Many bronchioles are filled with mucopurulent exudate.

Comment.—Similar pulmonary lesions have been observed in long standing cases of canine distemper; however, in this case the absence of distemper inclusions is noteworthy. It appears likely that this pneumonia could arise from any long standing infection. This case is being coded as pneumonia, interstitial, chronic due to unknown cause.

DISCUSSION

A case history is presented in which a patient exhibited classical symptoms of canine leptospirosis. No agglutination test was conducted as euthanasia was to be performed. Necropsy failed to incriminate either the organism of leptospirosis or the virus of Carré as the cause of this syndrome. It is interesting to note that glomerulonephritis and chronic interstitial pneumonia in its terminal stages would result in a syndrome simulating leptospirosis. It is cases like these that indicate the value of necropsies in veterinary practice.

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Streptomycin in the Treatment of Calf Pneumonia

This report covers the use of streptomycin in the treatment of 7 selected cases of pneumonia in calves, 3 of which were complicated with diarrhea. The animals varied in ages from 1 to 7 weeks. All of the cases terminated favorably.

Previous to the introduction of streptomycin, our routine treatment consisted of the use of blood transfusions, preferably from the dam; sulfadiazine by mouth; intravenous administration of a commercial solution containing 2.5 per cent of the sodium salts of sulfapyridine and sulfathiazole; and good supportive treatment. No records were kept as to the mortality with this treatment, but it was felt that it was too high.

Our experience with penicillin has not been very successful and this was to be expected as most of the pathogens that have been isolated from calf pneumonia are gram-negative, *i.e., Escherichia coli, Pseudomonas pyocyaneus, Pasteurella multocida,* with the possible exception of *Corynebacterium pyogenes* which is gram-positive. Intranasal spraying of penicillin mist was employed in several instances with no beneficial results. The same may be said of a tyrothricin spray used.

In our practice, the use of commercial serums has not proved too gratifying. The question of specificity should be taken into consideration here. Until it is practical to isolate the causative organism(s) from the nasal discharges or elsewhere as is done in man, the administration of a specific serum is not rational. The use of a serum containing mixed antibodies has been beneficial, but it was found that the doses recommended by the manufacturers were too low. This serum must be given in large quantities and often. The expense hardly warrants its use as it is not known whether the benefit is from the antibody content or from the serum alone. In fresh, whole, citrated blood from the dam, both are supplied at no extra cost.

Three of the 7 cases treated with streptomycin were associated with diarrhea, 2 of which preceded and 1 followed the pulmonary involvement. Beneficial results were observed from the use of streptomycin in all 3 of these complicated cases. Blood transfusions were given and sulfadiazine by the mouth. When the temperature subsided, sulfathalidine was substituted for the sulfadiazine. It should be noted here that the organisms most frequently incriminated in calf scours are also from the gram-negative group, *i.e., Salmonella enteriditis* and *E. coli.* The septicemia which generally accompanies the scours seems to be a condition where streptomycin is indicated.

As to the dosage of streptomycin, it was found that 0.25 Gm. dissolved in 5 cc. of sterile saline and given intravenously four times daily was satisfactory. This was the dosage used in all of the 7 cases. Since the maintenance of blood levels of streptomycin was no better with intramuscular than with intravenous administration,[1] the latter was employed as it was found easy and painless as compared with the other. The injections had to be continued at least four to five days to ensure complete recovery, as relapses occurred when the drug was discontinued after the second or third day. When the drug was omitted for one day after the injections were started, the course had to be prolonged considerably. One quart of citrated blood, preferably drawn from the dam, was injected subcutaneously daily for two to four days depending on the severity. Holstein-Friesian blood was used in 2 purebred Hereford calves with just as good results. Uncomplicated cases received sulfadiazine in the recommended doses for three to four days.

The calves were hand fed on whole milk until they regained the ability to nurse or drink. Resolution was noticed to be well under way from the third to the fifth day following the beginning of the streptomycin administration. — *R. F. Vigue, D.V.M., Sanford, Maine.*

[1]Graham, Boyd E., Vander Brook, Milton J., and Kuizenga, Marvin H.: Preliminary Studies on the Absorption and Excretion of Streptomycin in Dogs. Science, *103*, (1946): 364-365.

A relative excess of pituitary secretion may be more fundamental in diabetes than an absolute lack of insulin.

NUTRITION

Dry Food or Canned Food for Dogs?

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MODERN advances in dog nutrition and food technology have simplified the nutritional problems of dog feeding. The most difficult part of dog feeding, that of balancing a ration, has successfully been taken over by commercial firms.

Some dog owners, however, are still concerned over the comparative value of dry and canned foods, uncertain as to which will best meet the nutritional requirements of the animals and at the same time satisfy the taste. This concern is legitimate but, fortunately, should be easy to dispel with a short discussion of the facts involved. Since an important quality of a food is its palatability, let us begin with this subject.

When we speak of palatability, we imply that certain specific tastes are essential to stimulate appetite. The taste of meat or blood in a dog ration, for instance, would be a case in point. The belief that dogs, or other animals, have exclusive appetites for specific tastes is a residue from the days when the principles of nutrition were not well understood. This does not mean that under natural conditions different species do not prefer particular foods. It does mean, however, that under conditions of domestication, an animal will accept and be satisfied with any substitute that will furnish the nutrients it requires. It is true, also, that food habits may develop during a lifetime, but newly weaned animals will accept and continue to eat the most diverse kinds of food so long as they supply all the essential factors in the necessary amounts.

McCollum, in *Newer Knowledge of Nutrition,* rightly states that appetite is related to previous associations of tastes and odors. Appetite, then is an acquired physiologic response and not an inborn instinct. Numerous proofs of this statement can be given, *i.e.:* The variability of the diets and appetites among human beings throughout the world is perhaps the most striking example. The appetite which the Eskimo has for raw fish or for the half digested moss in the rumen of the reindeer certainly does not agree with the one we have for bread or fruits. The same may be said of the liking of the East Congo Pigmies for ants and caterpillars as against that of the desert Arab for soured milk. In other words, each people acquires an appetite and forms a habit of eating what food is available and socially approved in his particular environment.

In dogs, practically as much variation in the diet can be observed. As Robinson[1] said ". . . extensive studies have failed to reveal one . . . flavor . . . with universal dog appetite appeal." It is a mistake to believe that dogs will always prefer raw meat to any other food. In fact, laboratory animals raised on "synthetic rations" hardly know what to do with a bone or a piece of meat. Similarly, dogs accustomed to dry commercial rations have refused canned foods and vice versa. An experiment at Michigan State College[2] compared the palatability of a commercial dog food* offered as a wet meal, as dry pellets, and as dry ribbon. The results showed that all forms of the ration were well accepted by the dogs, one being apparently as "palatable" as the other.

Fox and mink, which until recently were believed to eat only rations which contained raw meat or at least tasted of blood, have been found to accept synthetic rations.[3,4] These rations contain only casein, sucrose, oil, minerals, and vitamins — substances having no similarity to meat in flavor or texture.

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*Kellogg's Gro-Pup.

It seems that a dog will eat readily any nutritious ration regardless of its taste or form. Whether it is offered as ribbon, meal, pellet, biscuit, baked meat loaf, or as wet canned meal makes little difference to his appetite.

There remains to discuss the nutritional value of the commercial dog foods. It can be stated immediately that most brands offered on the market are entirely satisfactory for growth and maintenance. The basic nutritive requirements of the dog are well known and have been repeatedly discussed in both scientific and lay journals. Progressive manufacturers are up to date on these requirements and see to it that their products meet them. Fresh meat may be helpful for optimum reproduction, but numerous laboratory investigations and practical experience have shown that it is relatively simple to balance a ration that will maintain dogs in good health without *fresh* meat. In fact, C. J. Koehn of the Alabama Polytechnic Institute[5] has obtained good reproduction with brood bitches receiving only a dry-type dog ration (table 1). This ration was fed to 12 bitches as the sole food for three and a half years. During this time over 500 young were raised. Some bitches produced as many as seven litters averaging 10 healthy pups each. It is hard to believe that better results could have been obtained had fresh meat been added to the ration. The same station has put out several other formulas, all dry rations (table 2), which have proved successful for both growth and maintenance. Most commercial rations are made of essentially similar ingredients.

TABLE 1—Composition of Auburn Ration 1

Yellow corn meal	35 lb.
Wheat bran	10 lb.
Wheat shorts	20 lb.
Meat scrap (Meat Meal)	10 lb.
Fish meal	10 lb.
Skimmilk powder or dried buttermilk	10 lb.
Alfalfa leaf meal	2 lb.
Bone meal	2 lb.
Salt	1 lb.

Up to the present and so far as we know, no commercial dog food has claimed to contain *fresh* meat. It is elementary and every one knows that unless it is frozen or dried, meat must be cooked if it is to be preserved for any length of time. In practice, both canned and dry dog food manufacturers, with few exceptions, use meat in the form of meat meal. This is a finely ground, dry-rendered by-product of the meat packing industry. Thus the greatest difference between a canned food and a dry one is that the former has enough water added to it to give it a desired consistency. True, it is possible in canned dog food to use meat by-products less severely cooked than is the case with meat meal. The point we wish to emphasize is that *dry* dog foods scientifically formulated are just as satisfactory for growth, maintenance and even, in some cases, for reproduction as any other form of ration.

TABLE 2—Composition of Modified Rations

Auburn Ration 2	
Yellow corn meal	58 lb.
Wheat shorts	20 lb.
Meat scrap	20 lb.
Salt	1 lb.
Sardine oil	1 lb.
Auburn Ration 3	
Yellow corn meal	46 lb.
Wheat shorts	20 lb.
Peanut meal	29 lb.
Bone meal	2.5 lb.
Salt	1.0 lb.
Limestone	0.5 lb.
Sardine oil	1.0 lb.
Auburn Ration 4	
Yellow corn meal	55 lb.
Wheat shorts	20 lb.
Meat scrap	10 lb.
Peanut meal	12 lb.
Salt	1 lb.
Limestone	1 lb.
Sardine oil	1 lb.

There is, of course, a difference in the nutritional value between various brands of dog foods. Therefore, a dog owner should make sure that the quality of his purchase is backed by a responsible concern. Where the nutritional values are equal, the purchaser of a dog food should be guided, not by the hypothetical palatability of the product, but rather by its price on a dry weight basis, its ease of feeding, its keeping qualities, and its physical storage characteristics, *i.e.*, will the product require refrigeration or mere storage on a pantry shelf?

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EDITORIAL

The Economic Side of Veterinary Medicine

From the time death stopped the pen of Rush Shippen Huidekoper in 1901 and superannuation overtook James Law, knowlege of agricultural economics practically vanished from our literature. We drew our head back under a shell, in the guise of science, while a gigantic agriculture developed around us. The number and value of farm animals, the agrarian factors affecting veterinary medicine, the business of farming and stock raising, the prodigious cows and the fast horses, and even the rules of the Jockey Club once received attention in attempting to show for whom and for what we are here.

Traditionally, the economic side of veterinary medicine always has been and always will be a stronger driving force than the scientific and technical sides can ever hope to be. The former is the end, the latter the means. Right from the start, regardless of time or place, the veterinary service, its colleges, its laboratories, and its personnel were created to safeguard economy. In this country, Public Law 41 of May 29, 1884, which created the U. S. BAI, was maneuvered through Congress, not to promote veterinary science but for the sake of the national economy. The preamble of that statute reads:

> An Act for the establishment of a Bureau of Animal Industry, to prevent the exportation of diseased cattle. . . .

What the boys in Washington were able to develop out of this is another story. The point here is to note that the primary motive was to restore the lost markets of our excited cattlemen. The law did not set up an American veterinary science. On the contrary, it stands as a lesson on the part economics plays in the operations of veterinary medicine.

There is a difference in being partly or wholly informed on the base of one's vocation. If one cannot rise to the level of pundit, none will question the advantage of doing so. The Wisconsin bull knocked down for $20,000, the Iowa boar sold for $4,000, and the Kentucky horse whose winnings netted $742,000 are not printed in a veterinary journal for entertainment. The main object is to show that veterinary science, from the mud of the barnyards to the classic environment of the laboratory, is a field that ought to be understood in all of its estates by those who work at it.

Equine Infectious Anemia

The virulent, contagious, inoculable anemia of Equidae due to the specific filterable, invisible, and noncultivatable virus discovered by Carré and Vallée in 1906 and transmissible to man under certain conditions is a progressive erythropenia of chronic duration strewn with acute episodes. Despite its extensive geographic distribution and frequence, medical literature has recorded but two authentic human cases contracted from horses: Luhrs' case in 1920 and Peters' case in 1924.

Luhrs' Observation.—During World War I, Luhrs frequently ate the meat of horses affected with infectious anemia. He intentionally exposed himself to the bites of insects, and inoculated himself with a needle while operating upon an infected horse (*Ztschr. f. Veterinärk., 52,* 1926:89). In 1917, he developed symptoms of migrane, violent intestinal catarrh, lumbago, general weakness, loss of weight, pale mucous membranes, bloody diarrhea, and fever oscillating between 39 and 40 C. Exacerbations and remissions occurred throughout 1918 and 1919.

On Nov. 26, 1919, 1 cc. of his blood serum was inoculated into a new horse subcutaneously. Thirty-nine days after the inoculation, the horse came down with infectious anemia.

On March 2, 1920, another horse inoculated with 5 cc. of his (Luhrs') blood

serum fell sick within twenty-one days with classical symptoms of the disease.

On March 3, 1920, a third horse inoculated with 1 cc. of Luhrs' blood serum—previously filtered—fell sick on the twenty-sixth day.

The blood serum of the last 2 horses mentioned was injected into a fourth horse and brought on the disease in seventeen days; a fifth horse inoculated with 1 cc. of serum from the third horse above mentioned also sickened after an incubation period of seventeen days.

An important additional fact was that Luhrs' blood was still virulent after three years.

Peters' Observation.—This is the case of a veterinarian of Holland described in *La Press Medicale* in 1924. The patient had been in constant contact with affected horses. The first symptoms were digestive: diarrhea, dysentery, and constipation; there were also herpetiform exanthema over the abdomen, violent and persistent unilateral headache in the occipital region, enlargement of the liver and spleen, normal temperature, lumbago, palpebral edema, pale mucous membrane, debility, and loss of weight. Respiratory and cardiac symptoms were absent. The condition remained much the same during 1917 and 1918 and declined in 1919. There were remissions and attacks through 1919, 1920, and 1921, with general amelioration. During all of the time, however, 1 cc. of his blood serum was virulent for horses; one of the horses inoculated died from the disease. The blood had lost its infectivity by 1924.

A third case of transmission of equine infectious anemia from horse to man was reported by Dr. J. F. Peters *(Ann. Intern. Med., 43,* 1945: 271). The diagnosis was based on the syndrome presented above and the usual manifestations of aplastic anemias which are so often observed in man. The author suggested that these cryptogenic anemias of man are perhaps due to the virus of equine infectious anemia and ought to be confirmed by equine inoculations. Then Stein and Mott *(Vet. Med., 41,* 1946: 385) investigated 2 suspected cases (girls of 20 and 13, respectively) whose blood failed to reproduce the disease in 2 inoculated horses after daily examinations for 106 and 93 days, respectively. The 2 horses, however, contracted the disease in the usual time when injected with authentic equine virus and thus showed that the 2 cases in the girls were not related to the equine disease.

The danger to man from equine infectious anemia should, nevertheless, retain attention because of the extensive use, therapeutically, of horse serums and organs, and on account of the consumption of horse meat.

In fine, although in so far as is known at the moment, the peril to man from the transmission of equine infectious anemia is not great, it cannot be rejected entirely, particularly in view of the use of horses for serum and hormone production and for human alimentation.*

"The California Veterinarian"

The progress and accomplishments of California veterinarians will henceforth be recorded in the pages of *The California Veterinarian,* volume 1, the first issue of which was published in September.

The appearance of this periodical as the official organ of the California State Veterinary Medical Association marks a new and perhaps uncertain step forward in the affairs of constituent associations. It is new because it is linked with a revised policy of the California group whereby a full-time executive secretary, Mr. Charles S. Travers, has been employed to handle the organization's ever-increasing burden of work and to manage the publication of a bimonthly magazine. It is uncertain because, as the CSVMA states, it is an experiment in expanded service and activities, the success of which will depend upon how well the veterinarians of that state support it, financially and otherwise.

Naturally, the AVMA welcomes any move designed to bolster the organized strength of the profession. The California state association now has slightly over 400 members out of the 1,018 veterinarians in the state. Its aim is to increase the membership to at least 700.

We wish the *California Veterinarian* success on its journey into the publications field and are hopeful that it will aid the California association's progress toward its goal.

*To safeguard commercial serums, the U. S. BAI requires that all antiserums prepared from horses be heated at 58 to 59 C. for one hour. This heating destroys the virus.

Waterborne and Foodborne Diseases in the United States

Presented here are two tables summarizing the diseases conveyed by water and various types of food during the year 1945, the latest year for which statistics are available. The tables were compiled from information published annually by the Sanitary Engineering Division, U. S. Public Health Service, from data supplied by state and territorial health authorities.

One reason for presenting the figures is their interest to the many veterinarians engaged in food sanitation work; another reason is to show the relationship of the various food products to the overall picture of disease outbreaks attributed each year to water and food and thereby, perhaps, help to answer the lament in the October issue of *Poultry Tribune*. That editorial took strong exception to an AVMA convention news release based on Dr. P. J. Brandly's paper, "Poultry Inspection as Part of the Public Health Program." In his paper Dr. Brandly stated, among other things, that of 232 outbreaks of food poisoning other than botulism and chemical food poisoning reported by the U. S. Public Health Service as occurring in 1945, 47 were reported as associated with poultry meat products.

The release stated that "Poultry meat and poultry products were blamed [in the Brandly paper] for approximately 20 per cent of the reported outbreaks of food poisoning in the United States. Based on figures for 1945, the percentage was cited . . . to show the importance of poultry inspection in the nation's public health program. The sale of diseased poultry carcasses introduces 'an important health hazard' into American kitchens. From the poultry meat, contamination may be carried to other food products through the use of the same knives and pans. The seriousness of this danger has now been realized as a result of new research more than ever before. Several poultry infections formerly believed to be confined to birds have now been found to affect human beings."

The data here are not intended as a defense either for Dr. Brandly or for the release. But we doubt very much that the release did "enormous harm to the poultry industry" as charged by *Poultry Tribune*, or was "unfair" in singling out "one group of commodities responsible for only 20 per cent of the reported outbreaks" without naming the products responsible for the other 80 per cent.

In preparing the tables, care was taken to eliminate figures from the U.S.P.H.S. summaries where a product was only "suspected" as the vehicle. As a result poultry and poultry meat products, for example, are shown as responsible for 37, or 11.0 per cent, of the 334 total outbreaks tabulated. Several interesting conclusions may be drawn from the tables and particularly from the detailed summaries issued by the Public Health Service:

1) In rare instances only can a *commercially* canned or processed food be charged with a disease outbreak; when such a product is involved, it is almost always attributable to improper handling *in the home*. Considering the many millions of containers of commercially processed foods that are sued by consumers every year, the safety factor of such products must be rated as very high. Most segments of the food industry have recognized this requirement as a fundamental for many years and have developed their processing techniques accordingly.

2) In contrast, the home canning of vegetables and the preparation of various types of home cured sausages, meats, etc., is *relatively* dangerous to the people who consume such products. Thus, the 11 outbreaks of botulism (18 deaths) were, in every in-

TABLE I—Morbidity and Mortality from Water and Various Types of Foods

Product Involved	Outbreaks No.	Outbreaks %	Cases No.	Cases %	Deaths No.	Deaths %
Drinking Water....	26	8.0	5,778	28.0	6	7.3
Meat and Meat Products	60	18.0	4,105	20.0	6	7.3
Milk and Milk Products	24	7.0	2,388	12.0	17	20.7
Poultry and Poultry Meat Products ...	37	11.0	1,272	6.0	3	3.6
Fish and Sea Foods	12	3.0	161	1.0	7	8.5
Miscellaneous Foods and Beverages ...	103	31.0	3,485	17.0	36	44.0
Food Vehicle Undetermined	72	22.0	3,151	16.0	7	8.5
Totals	334	100.0	20,340	100.0	82	99.9

TABLE 2—Type, Origin, and Incidence of Water- and Foodborne Disease in the United States in 1945*

Type of Disease	Water			Milk and Milk Products			Meat and Meat Products			Poultry and Poultry Products			Fish and Seafood			Miscellaneous† Foods and Beverages			Food or Vehicle Undetermined			Total Outbreaks	Total Cases	Total Deaths
	O.	C.	D.	O.	C.	D.	O.	C.	D.	O.	C.	D.	O.	C.	D.	O.	C.	D.	O.	C.	D.			
Chemical Food Poisoning	1	30	..	..	....	..	..	....	..	..	....	..	..	...	..	6	34	..	..	....	..	7	64	..
Bacterial Food Poisoning and Gastroenteritis																								
Salmonella sp.	..	....	..	4	600	..	6	186	1	3	77	..	1	7	..	4	186	..	2	22	..	20	1,078	1
Staphylococcus sp.	..	....	..	4	403	1	26	2,096	2	12	312	..	1	3	..	36	2,197	1	8	502	..	87	5,513	4
Other Organisms and Mixed Infections	1	195	..	2	485	10	..	....	..	..	....	..	1	33	..	9	95	3	2	22	..	15	830	13
Unidentified	11	5,384	..	4	434	..	24	1,630	2	21	583	3	5	61	..	31	623	..	43	2,089	..	139	10,804	5
Botulism	..	....	..	..	....	..	..	....	..	..	....	..	..	...	..	11	33	18	1	3	3	12	36	21
Brucellosis	..	....	..	2	19	..	..	....	..	..	....	..	..	...	..	...	....	..	..	....	..	2	19	..
Diarrhea and Dysentery	..	....	..	..	....	..	..	....	..	1	300	..	..	...	..	3	248	6	6	355	3	10	903	9
Diphtheria	..	....	..	1	53	2	..	....	..	..	....	..	..	...	..	...	....	..	..	....	..	1	53	52
Infectious Hepatitis	..	....	..	1	14	..	..	....	..	..	....	..	..	...	..	...	....	..	..	....	..	1	14	..
Septic Sore Throat	..	....	..	3	308	..	..	....	..	..	....	..	..	...	..	...	....	..	1	46	..	4	354	..
Typhoid Fever	13	169	6	3	72	4	..	....	..	..	....	..	4	57	7	3	69	8	9	112	1	32	479	26
Trichinosis	..	....	..	..	....	..	4	193	1	..	....	..	..	...	..	...	....	..	..	....	..	4	193	1
Totals	26	5,778	6	24	2,388	17	60	4,105	6	37	1,272	3	12	161	7	103	3,485	36	72	3,151	7	334	20,340	82

*Compiled from epidemiologic data from the U. S. Public Health Service.
†Includes home-canned and commercially canned fruits and vegetables, mushrooms, custards, commercial and home-made pastries, beverages, etc.
O. = Outbreaks. C. = Cases. D. = Deaths.

stance, attributed to home canned or home cured products and not once to commercially prepared foods.

3) While the 334 disease outbreaks involving some 20,000 persons, with 82 deaths, are regrettable, when viewed in the light of the total annual morbidity and mortality from infectious diseases in the United States, they are almost infinitesimal. They are not negligible, however, because some of the outbreaks and some of the deaths can and should be prevented by improved methods and by educating housewives and others in the correct handling of foods in the home.

Finally, it may be said that nearly all segments of the food industry have acquired a fine awareness of their relationship and responsibilities to the public health. In so doing, they have developed production and processing techniques to insure the quality and safety of their products, factors so essential in generating consumer acceptance and confidence. In this respect, we are sure that the poultry people do not differ in their thinking and program from the other elements in our vast food industry. However, since the great expansion in production and consumption of poultry and poultry meat products is somewhat recent in development, it may be that that industry is not yet fully conditioned to its place in the public health scene. We predict that, in the near future, instead of shying away from any mention of human disease being conveyed by poultry products, the leaders in that field will be seeking every such possibility together with its appropriate preventive solution just as, for example, the dairy industry and meat packers have been doing for a long time. As research on the inter-relationship of animal and human diseases continues, new facts will be developed, and no one should be unduly perturbed if, from time to time, a new relationship is demonstrated which previously was not thought to exist.

In the 1890's, the American Medical Association began to expose fraudulent medical colleges and started medical education toward its present high status, a reminder that much the same step was taken by the AVMA about that time.

CURRENT LITERATURE

ABSTRACTS

Duration of Sperm Fertility in Ewes

The length of time sperm may remain fertile in the female reproductive tract depends upon the conditions within the female tract and the quality of the sperm cells. Because the sperm of the ram may be expected to retain its ability to fertilize an ovum for approximately two days after it enters the reproductive tract of the ewe, it is necessary to mate ewes but once during the heat period of normal length—provided the sperm is of high quality and the ewe is normal.—[*W. W. Green: Duration of Sperm Fertility in the Ewe. Am. J. Vet. Res., 8, (July, 1947): 299-300.*]

Treatment of Calf Pneumonia

The chemotherapy of calf pneumonia is not very effective (in Russia) because of the complexity of the infection. Lack of exact information as to the infective agent in each case leads to errors in the choice of a therapeutic agent. Believing that this difficulty could be avoided by therapy designed to stimulate the reticulo-endothelial system, the author employed antireticular-cytotoxic serum (ACS) in 413 cases of calf pneumonia, with 7.8 per cent mortality. Controls were not mentioned. The serum was given subcutaneously, 2 units per kilogram, repeated three times at two- or three-day intervals.—[*P. A. Karasev, Alma-Ata Veterinary Institute, Kazakstan: Treatment of Calf Pneumonia with Antireticular-Cytotoxic Serum (ACS). Veterinariya, 24, (Jan., 1947): 16.*]

ROBERT E. HABEL

Hormone Therapy

The possibilities and pitfalls of hormone treatment in animals are summarized with the following observations, based on five years of clinical and histologic study:

Gonadotropic Hormones. — Gonadotropin-like hormones of placental and urinary origin are not recommended in anterior pituitary deficiencies. While promoting ovulation and folliculation in laboratory animals, they do not establish a normal sexual cycle in large domestic animals or fur-bearing animals. Where the expense is warranted, the practitioner should use true anterior pituitary homones for this purpose.

Estrogens.—Only in rare cases do natural or synthetic estrogens provide fertility. Their fundamental influence is on secondary sexual symptoms, such as estrus and mammary tissue increase with accompanying lactation. Doses as large as are required for retained placenta cases may cause pituitary shock, with resulting temporary or permanent sterility. Pituitary stimulation by means of mild, continuous administration of estrogen or androgen has not been fully investigated.

Androgens.—In the therapeutic use of androgenic substances, pituitary refraction and eventual peripheral side-effects must be anticipated, except where life expectancy is not important, as in caponization. Where nitrogen retention is the goal, dosage should always be moderate.

Anterior. Pituitary Extracts.—True anterior pituitary hormones will restore the sexual cycle in most cases, with resulting fertility and recurrence of primary and secondary sex functions, although previous administration of excessive doses of androgens or estrogens may preclude this effect.—[*W. M. Swangard: The Hormonal Relationship of the Anterior Pituitary Gland and the Gonads. Canad. J. Comp. Med. and Vet. Sci., 11, (July, 1947): 193-202.*]

Control of Foot-and-Mouth Disease in Norway

Foot-and-mouth disease was not diagnosed in Norway until 1926. The epizoötic that occurred then and the few outbreaks since have been controlled readily as compared to the situation in other counties. This is due to several conditions in Norway favorable to the control of foot-and-mouth disease. Norway is surrounded on the south, west, and north by broad areas of sea. Storms from the south, however, apparently bring the virus from Denmark where the disease is often prevalent. Herds of cattle are usually small and the farms are isolated and often surrounded by forests. Outbreaks that have occurred were usually experienced in winter and the heavy snows covered contaminated areas and weakened or destroyed the virus. In most areas it is a common practice to use covered manure pits which prevents the transmission of virus by flies or wind. Radical procedures of control instituted when necessary by the government are supported by the agricultural population.—[*K. A. Blystad: Considerations on the Control of Foot-and-Mouth Disease in Norway. Skand. Vet.-Tidskr., 36, (Dec., 1946): 706-717.*]

A. G. KARLSON

Tuberculin Testing in Poland

Dr. Wilder of the UNRRA veterinary mission demonstrated the intradermal injection of tuberculin into the left caudal fold and recommended its wide use in Poland.—[*Waclaw Chybowski: The American Method of Tuberculinizing Cattle. Medycyna Weterynaryjna, 3, (Feb., 1947): 86.*] L. I. HALLAY

BOOKS AND REPORTS

Poultry Disease Prevention

Heading out with a statement that poultry diseases can be prevented much easier than they can be treated, this well-illustrated bulletin sets forth in detail how to carry out a ten-point program for poultry disease prevention designed by poultry authorities at the University of Massachusetts. Though intended primarily for poultry growers, the information should be of considerable value to veterinarians whose clients consult them on problems of flock management and disease control.

The ten-point program, with illustrations depicting each step, covers (1) proper manure disposal, (2) dead bird disposal, (3) a rodent control program, (4) vaccination, (5) litter management, (6) rearing of replacements away from adults, (7) cleaning and disinfecting, (8) consideration of visitors, used crates, feed bags, and egg cases, (9) culling and depopulation, and (10) importance of early and correct diagnosis of diseases.—[*Poultry Sanitation and Disease Prevention. By Carlton C. Ellis, extension poultry pathologist, University of Massachusetts. Leaflet No. 28, revised May, 1947. 20 pages. Extension Service, University of Massachusetts. Public document.*]

Annual Review of Biochemistry

Few practising veterinarians have time to keep tab on the multiple ramifications of biochemistry that plot the course of nutrition and feeding methods. Such intricacies of scientific pursuit are left to workers in laboratories, and for the busy veterinarian or physician it suffices that as important discoveries are made, the end results are passed down in handy, well-digested reports that tell how to put these discoveries to practical use. This readers'-digest way of gleaning new facts affords a sense of professional know-how that serves well until a book like *Annual Review of Biochemistry* comes along to crack the thin shell of superficial knowledge. It is doubtful if anyone besides the career biochemist will read this volume without being astonished at how much has been done in this field and how little of it he clearly understands.

This book brings together 30 widely known authorities in the field of biochemistry in 25 chapters that review recent work on such phases as the chemistry and metabolism of substances essential to animal and plant life, general aspects of nutrition and deficiency disease, and radioactive isotopes in research. Of special interest to veterinarians are scholarly chapters on mineral metabolism, choline, fat-soluble and water-soluble vitamins, and antioxidants.

Sixteen consecutive annual issues of this book speak well for its scientific acceptance and for its value as a ready reference on biochemic progress. It is recommended as important reading for the veterinarian in research and as profitable reading for the practising veterinarian who desires to extend his professional scope beyond the limit of everyday knowledge.—[*Annual Review of Biochemistry, Volume XVI, 1947. Edited by J. M. Luck. Cloth. 740 pages. Annual Reviews, Inc., Stanford University P.O., Calif. 1947. Price $6.00.*]

Animal Castration

This is the third revised edition of a well-known book—known and widely read since 1914. The second edition came out in 1920 just after the World War I and the third after the second global conflict. It is by far the most comprehensive work ever published on the subject in the English language. Its predecessors and contemporaries were little more than vestpocket manuals of dubious popularity and usefulness, and confined mostly to castration of the male horse. The spaying of all farm animals and of anomalous males upon which the teacher, student, and practitioner seeks information is based upon long experience. The author is the only living graduate (we know) of the famous school of Farmer Miles which taught castration to classes regularly during the last three decades of the nineteenth century, and established a technique of "straight" and ridgling castration and restraint that was to supersede former techniques.

White's work is unique for its graphic and numerous illustrations, most of them classical drawings characterizing each of the major step of the operations described.

Since the second edition was published (1920), Burdizzo's emasculatome came into general use for the castration of sheep and bovine animals and, to a certain extent, in other farm animals. The use of this instrument in the castration of bulls and calves, rams and lambs, stallions and colts, mules, burros, camels, boars and pigs, dogs, and cockerels is described with competent illustrations for the first time in an English text. This book, in so far as the techniques of castration and spaying of farm animals is concerned, has no peer in the English language.—[*Animal Castration. Third Edition. By George Ranson White, M.D., D.V.M., Nashville, Tenn. 287 pages. Illustrated. Published by the author. 1947.*]

THE NEWS

Code of Ethics Exhibit Available for Veterinary Meetings

The Code of Ethics exhibit shown at the AVMA convention in Cincinnati in August is now available for loan to a limited number of constituent associations for display at their meetings.

This exhibit is convenient to assemble and the only materials the using association has to furnish are thumbtacks and a billboard-type of panel measuring 8 ft. wide and 5 ft. high, mounted on legs to raise the panel 2 or 3 ft. off the floor. Local firms which specialize in painting signs for conventions usually will furnish such panels at a nominal charge.

The exhibit focuses attention on the question, "Do You Conform to the AVMA Code of Ethics?" By a series of illustrations, it shows ethical and unethical types of veterinary listings for classified telephone directories, local newspapers, and letterheads and professional cards.

Request for the exhibit should be made to the AVMA office by the secretary of the using association not less than two weeks in advance of the meeting, and preferably one month or longer in advance. Shipment will be made express collect, and the material must be returned express prepaid.

AVMA Exhibit at National Farm Show in Chicago

Chicago, centered in the nation's largest agricultural area, is preparing to play host to thousands of farm families and agricultural leaders from Nov. 29 through Dec. 7, 1947, officially proclaimed as National Farm Week. Important events scheduled for the week are the International Live Stock Exposition, the National Farm Show, and meetings of various agricultural and livestock groups, including the 4-H Club Congress.

The AVMA exhibit on swine erysipelas, which has attracted widespread interest at several conventions this year, will be featured among the educational exhibits of the National Farm Show at the Chicago Coliseum from November 29 through December 7. This show will be devoted to exhibits and demonstrations of the newest agricultural, dairy, poultry, and farm-home equipment.

Compared with 1941, it requires \$12.00 in 1947 to buy provisions (meat, butter, eggs) costing \$5.00 then.

Women's Veterinary Association Holds First Annual Meeting

The efforts of Drs. Mary K. Dunlap, Lucille S. Dimmerling, and several other women veterinarians to form an inter-American professional organization became a recorded accomplishment at Cincinnati on August 18, when the newly organized Women's Veterinary Association held its first annual meeting in conjunction with the AVMA convention.

Sixteen women graduates from the United States, Cuba, and Brazil attended the business sessions and voted Dr. Lucille S. Dimmerling of East Liverpool, Ohio, as president. Drs. Elinor McGrath of Chicago, Ill., Patricia O'Connor of Staten Island, N. Y., and Edith Williams of Toronto, Ont., were elected vice-presidents. Lt. Doreen Hatfield of the Army Veterinary Corps, Baltimore, Md., was chosen secretary and Dr. Josephine Browne of Fargo, N. Dak., treasurer. A periodical bulletin of the organization will be edited by Dr. Mary K. Dunlap of Kansas City, Mo.

The group will represent women veterinarians throughout the America's and has made extensive plans for promoting the interests of women students as well as graduates.

APPLICATIONS

The listing of applicants conforms to the requirements of the administrative by-laws—Article X, Section 2.

First Listing

Alemar, Carmelo
Box 13, San Juan, P. R.
D.V.M., Michigan State College, 1946.
Vouchers: O. A. Lopez P. and A. Rivera.

Bramley, Melvin J.
4261 Pearl Rd., Cleveland, Ohio.
D.V.M., Ohio State University, 1933.
Vouchers: W. R. Krill and R. E. Rebrassier.

Hanna, Harvey E.
Springville, Iowa.
D.V.M., Iowa State College, 1942.
Vouchers: H. N. Strader and J. B. Bryant.

Hawkins, Thomas H.
1704 Hurley Ave., Fort Worth, Texas.
D.V.M., Texas A. & M. College, 1937.
Vouchers: L. G. Cloud and F. R. Jones.

Maugel, John P.
525 Widener Pl., Philadelphia 20, Pa.
V.M.D., University of Pennsylvania, 1935.
Vouchers: W. J. Lentz and S. F. Scheidy.

Second Listing

Agin, George R., 3318 Harrison Ave., Cheviot, Ohio.

Alley, Tom K., 6023 Fairfield, Shreveport, La.

Anson, Charles W., 2566 McGuffey Rd., Columbus, Ohio.

Antelyes, Jacob, 62-09 Fresh Pond Rd., Middle Village, N. Y.
Barber, Russell A., Columbiana, Ohio.
Belden, Maurice F., 131 Home Ave., Xenia, Ohio.
Bonelli, Wm. G. Jr., Rt. 1, Box 4, Saugus, Calif.
Brown, Victor R., 75 James St., Guelph, Ont., Can.
Combs, Bertrand O., Brooklyn, Iowa.
Cook, William G., 911 E. Sandusky St., Findlay, Ohio.
Cortizo B., Jose M., Ave. 2a No. 106, 11 y 12, Ampliacion, Almedares, Marianao, Havana, Cuba.
David, Tomas T., College of Veterinary Science, University of the Philippines, Pandacan, Manila, P. I.
Firth, George A., Delavan, Ill.
Frelih, Ernest O., Hacienda Fundacion, San Cristobal, P. T. Dominican Republic.
Frost, Charles B., 119 N. Main St., Georgetown, Ohio.
Greene, William O., Hillsboro Rd., Nashville, Tenn.
Griffin, Michael J., 903 Dwight St., Holyoke, Mass.
Hovel, John T., 1242 Church St., Stevens Point, Wis.
Jones, Frederick O., 1707 Vidal Ave., White Rock, B. C., Can.
Karr, Owen M., 2710 Scioto Trail, Portsmouth, Ohio.
McClain, Louis C., 213 N. 15th St., Birmingham, Ala.
McKercher, Delbert G., New York State Veterinary College, Cornell University, Ithaca, N. Y.
Morales R., Angel M., Industria No. 161, Havana, Cuba.
Phillips, D. M., 1315 Oakview Rd., Ashland, Ky.
Rea, Robert G., 201 S. 4th, West Branch, Mich.
Steiner, Amiel J., 184 Walnut St., Lexington, Ky.
Stone, Charles E., 206 Elm St., Penn Yan, N. Y.
Valdes F., Mario, J. Sanguily No. 338, Guanabacoa, Havana, Cuba.

Second Listing

The following applications are all from members of the newly formed Veterinary Society of Food Sanitarians.

Boyes, Nelson R., P. O. Box 424, Nebraska City, Neb.
Brown, Eli W., Mammoth Spring, Ark.
Collins, Cassius A., 174 Rector St., Perth Amboy, N. J.
Currier, Burt L., 2234 Territorial Rd., St. Paul, Minn.
Doherty, Stephen S. 235 N. 5th St., Quincy, Ill.
Eichhorn, Glen F., c/o Hess Michigolden Duck Farm, Hemlock, Mich.
Garrett, Ashton, C., 3517 S. Western Blvd., Chicago, Ill.
Gross, Fred, 219 N. Mt. Holly Ave., Louisville, Ky.
Hobbs, Joseph W., Rm. 910, U. S. Custom House, 610 S. Canal St., Chicago, Ill.
Hoylman, John L., Oxford, Neb.
Hyland, Eugene H., 814 Turner St., Los Angeles, Calif.
Law, Buell S., 2550 W. 35th St., Chicago, Ill.
Mericle, Robert B., 1300 Marian Way, Sacramento, Calif.
Paulish, Chelsea, T., 205 Blake St., Bentonville, Ark.
Prater, Arizona, 524 N. 27th Ave., Omaha, Neb.
Renne, Frank A. Jr., 1213 Buena Vista St., Pittsburgh, Pa.
Sailor, Ernest S., 75 Woodside Rd., Winchester, Mass.
Scudder, Daniel D., 239 Adams St., Pendleton, Ind.
Shute, John D., Easton, Ill.
Swink, Clarence E., Rm. 910, U. S. Custom House, 610 S. Canal St., Chicago, Ill.
Thompson, J. L., 426 W. 62nd St., Chicago, Ill.
Tofflemire, Charles D., Cameron, Mo.
Winder, Hiram L., Independence, Iowa.
Wishard, Dell E., c/o General Foods, Pocomoke City, Md.
Wood, John W., 7959 Vernon Ave., Chicago, Ill.

1947 Graduate Applicants
First Listing

The following are graduates who have recently received veterinary degrees and who have applied for AVMA membership under the provision granted in the Administrative By-Laws to members in good standing of junior chapters. Applications from this year's senior classes not received in time for listing this month will appear in later issues. An asterisk (*) after the name of a school indicates that all of this year's graduates have made application for membership.

Ontario Veterinary College

BEST, ROBERT H.
Boissevain., Manitoba, Can.
Vouchers: H. H. Ross and A. Savage.

University of Pennsylvania

BREE, MARTIN A.
3535 Chippendale Ave., Philadelphia 36, Pa.
Vouchers: J. H. Mark and R. C. Snyder.

Texas A & M College

BAKER, WILLIAM L.
Route 1, Kennett, Mo.
Vouchers: H. T. Barron and R. P. Marsteller.

Second Listing

Michigan State College

Abbott, Russell N., D.V.M., 324 Essex St., Bangor, Maine.
Bachtold G., Martin, Xochicalco No. 29, Col Narvarte, Mexico, D. F.
Baker, Robert N., D.V.M., Perrysburg, Ohio.
Beaman, Lorraine C., D.V.M., 72 Mora St., Dorchester, Mass.
Booth, Nicholas H., D.V.M., R.F.D., New London, Mo.
Burns, Robert F., D.V.M., 443 Worden St., S. E., Grand Rapids, Mich.

Medical science has progressed farther in the last one hundred years than in the previous twenty centuries.—*President Bortz of the AMA.*

Caldwell, Raymond E., D.V.M., 301 Holly St., Brainerd, Minn.
Earl, Francis L., D.V.M., Jasper, Mo.
Finkbeiner, Wayne L., D.V.M., M.S.C. Trailers, H-4, East Lansing, Mich.
Finlay, John W., D.V.M., 315 Albert Ave., East Lansing, Mich.
Fletcher, Clifford H., D.V.M., 526 Sunset Lane, East Lansing, Mich.
Grafton, Thurman S., D.V.M., 820 Prospect St., Lansing, Mich.
Hanawalt, Eugene M., D.V.M., 2355 Lombard St., San Francisco, Calif.
Hartline, Jean M., D.V.M., 1601 N. Walnut St., Dover, Ohio.
Hathaway, Morris M., D.V.M., 55 Harsen Rd., Lapeer, Mich.
Hill, D. A., D.V.M., c/o Dr. C. A. Perkins, West DePere, Wis.
Jackson, William F., D.V.M., 3612 Lee Rd., Shaker Heights, Ohio.
Kadlec, Nancy D., D.V.M., 2948 W. 59th St., Chicago, Ill.
Lung, Herman L., D.V.M., Ligonier, Ind.
Lutz, Charles H., D.V.M., 134 W. Patterson, Flint, Mich.
McEvoy, James P. D.V.M., 521 Maxwell, Royal Oak, Mich.
Mann, James D., D.V.M., Marion, Ind.
Miller, Joseph M., D.V.M., 451 Evergreen, East Lansing, Mich.
Moe, Douglas F., D.V.M., 607 Garfield Ave., Valparaiso, Ind.
Nuttall, Robert J., D.V.M., 340 N. Jackson St., Waukegan, Ill.
O'Shaughnessy, Robert P., 1412½ Vine St., Lansing, Mich.
Paulson, Norman R., Strum, Wis.
Paulson, Robert F., D.V.M., 4351 Schubert Ave., Chicago, Ill.
Peigh, Harold V., D.V.M., Hamlet, Ind.
Pilchard, Edwin I. Jr., D.V.M., 902 S. Lincoln, Urbana, Ill.
Raymer, Geraldine W., D.V.M., 14603 Ashton Blvd., Detroit, Mich.
Ross, Gordon C., D.V.M., Perry, Mich.
Schmidt, Donald A., D.V.M., Rt. 2, Box 174, Wittenberg, Wis.
Skinner, Charles H. Jr., D.V.M., 515 Pearl St., Thorntown, Ind.
Suda, Otto H., D.V.M., 719 D St., Fresno, Calif.
Wesson, Oscar, D.V.M., 410 N. Magnolia, Lansing, Mich.
Wright, John H., D.V.M., P. O. Box 37, North Manchester, Ind.
Young, Sam H., D.V.M., P. O. Box 614, East Lansing, Mich.
Youngs, Joan K., D.V.M., 3409 Aldringham Rd., Toledo, Ohio.

Texas A. & M. College

Heath, Charles R., D.V.M., Winona, Miss.
Hensler, H. L. Jr., D.V.M., Amboy, Ind.
Johnson, John E., D.V.M., Sherrod Ave., Covington, Tenn.
Melancon, James L., D.V.M., 418 Evangeline Dr., Lafayette, La.
Singletory, C. T., D.V.M., Box 596, Lafayette, La.
Tennison, Lafayette B. Jr., D.V.M., 624 Melba St., Dallas, Texas.
Willie, Tony C. Jr., D.V.M., 524 E. Mountain St., Seguin, Texas.

U. S. GOVERNMENT

The Rehabilitation of The National Guard.—Defense-minded citizens will keep in touch with the rehabilitation of the National Guard which practically disappeared through being absorbed by the Regular Army during World War II. The National Guard is of colonial origin. Its first unit was the Old North Regiment organized in New England in 1636. The present 182nd Infantry of Massachusetts is its direct descendant. Among early National Guardsmen were Ethan Allen, Daniel Boone, and George Rogers Clark. The National Guard was first so named when military units of New York turned out to honor General Lafayette, commander of the National Guard of Paris, on his return to America in 1824. The procurement objective is a force of 635,000 in which all good citizens are asked to interest themselves. The National Guardsman of the future will receive a fixed pay per diem on training during the year, in addition to the fifteen days of field training in summer and other training courses conducted by the Regular Army. The new chief of the National Guard Bureau of the United States is Major General Kenneth F. Cramer, longtime National Guardsman of New York.

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Veterinary Personnel Changes.—The following changes in the force of veterinarians in the U. S. BAI are reported as of Sept. 15, 1947, by Chief B. T. Simms.

TRANSFERS

Lowell R. Barnes, from San Juan, P. R., to Springfield, Ill.

Thomas C. Berry, from Mexico City, Mexico, to Montgomery, Ala.

Robunstiano B. Ferro, from Omaha, Neb., to Lake Charles, La.

Frank L. Foster, Buffalo, N. Y. (from II to I & Q).

Robert M. Hollen, from Des Moines, Iowa, to Mexico City, Mexico.

Owen Howells, from St. Louis, Mo., to Mexico City, Mexico.

Kenneth R. Hoyt, from Olympia, Wash., to Mexico City, Mexico.

George M. McGee, from Raleigh, N. Car., to Mexico, City, Mexico.

Earl R. Mackery, from Atlanta, Ga., to Mexico City, Mexico.

R. Francis Milici, from New York, N. Y., to Brier Hill, N. Y.

James D. Nolan, from Seattle, Wash., to Los Angeles, Calif.

Gabriel Nassov, from Albany, N. Y., to Springfield, Mass.

Albin G. Pass, from Frankfort, Ky., to Mexico City, Mexico.

Edwin S. Ring, from New York, N. Y., to Philadelphia, Pa.

Israel M. Saturen, from Harrisburg, Pa., to Mexico City, Mexico.

Luke R. Sinclair, from San Francisco, Calif., to Duluth, Minn.

Hiram L. Tate, from Chicago, Ill., to Mishawaka, Ind.

Howard I. Thaller, from Springfield, Ill., to Philadelphia, Pa.

Daniel F. Werring, from St. Paul, Minn., to Mexico City, Mexico.

Resigned

Boyd Adams, Mexico City, Mexico.
Allen A. Foster, Los Angeles, Calif.
Scott Haggard, Fort Worth, Texas.
Jacob Holtzmann, San Francisco, Calif.
Roy L. Mesenbrink, St. Louis, Mo.
Norman M. Nelson, Des Moines, Iowa.
Clarence E. Paden, Jr., Raleigh, N. Car.
Joseph S. Quigley, St. Paul, Minn.
John W. Smith, Denver, Colo.
Jerome C. Speltz, Madison, Wis.
Alan R. Wagner, Mexico City, Mexico.
Harris D. Webster, East Lansing, Mich.

Retired

Carl H. Fauks, Oklahoma City, Okla.
James R. Hogan, San Francisco, Calif.

Death

Alven D. Tudor, Frankfort, Ky.

COMMENCEMENT

Texas A. & M. College

At the commencement exercises of the Agricultural and Mechanical College of Texas on Aug. 29, 1947, the following candidates were presented for the D.V.M. degree.

Henry Ash	John E. Johnson
W. L. Baker, Jr.	James L. Melancon
Jack R. Buie	J. L. Mitchell
W. D. Cornelius	Ben L. Russell
Adrian S. Eder	R. E. Schiefelbein
Oliver F. Goen	C. T. Singletary
Charles R. Heath	L. B. Tennison, Jr.
H. L. Hensler, Jr.	T. C. Wille, Jr.
F. C. Jackson	G. T. Woodard

AMONG THE STATES AND PROVINCES

Alabama

Conference for Veterinarians.—The School of Veterinary Medicine, Alabama Polytechnic Institute, Auburn, held its twenty-third annual conference for veterinarians on Sept. 4 to 6, 1947. The following speakers contributed to the scientific program.

Dr. W. J. Gibbons, Alabama Polytechnic Institute: "Contagious Exanthema of Cattle," "Casting under Anesthesia," and "Diseases of the Nervous System" (film).

Dr. H. C. H. Kernkamp, University of Minnesota, St. Paul: "Noninfectious Diseases of Swine," and "Infectious Diseases of Swine."

Dr. M. G. Fincher, Cornell University, Ithaca, N. Y.: "Mastitis and Its Relation to Public Health," "Herd Control of Mastitis," "Physical Examination of Mastitis Cows," and "Safeguards in Artificial Insemination."

Dr. J. H. Steele, Veterinary Public Health Section, States Relations Division, U. S. Public Health Service, Washington, D. C.: "Public Health."

Dr. F. A. Clark, Alabama Polytechnic Institute: "Laboratory Tests for Mastitis."

Dr. J. G. Horning, Houston, Texas: "Cataracts," "Office Practice," and "Perineal Herniorraphy."

Dr. H. C. Stephenson, Cornell University, Ithaca, N. Y.: "Cystotomy," "Enucleation of the Eye," and "Diseases of the Genito-Urinary Tract."

Dr. R. B. Gochenour, Biological Laboratories, Pitman-Moore Co., Zionsville, Ind.: "Virus Diseases other than Distemper in Dogs."

Dr. W. S. Bailey, Alabama Polytechnic Institute: "The Present Status of Newcastle Disease and Leucocytozoön Infection."

Dr. S. A. Edgar, Alabama Polytechnic Institute: "The Control of Poultry Parasites."

Dr. C. E. Dee, Miami, Fla.: "Practical Therapeutics in General Practice."

Dr. E. E. Williams, U. S. BAI, Montgomery, Ala.: "Vesicular Disease" (film).

Dr. R. C. Klussendorf, assistant executive secretary, AVMA, Chicago, Ill.: "AVMA Activities."

Dr. D. A. Smith, Iowa State College, Ames: "Typhlectomy," and "Gastrotomy."

Dr. W. L. Stroup, Corinth, Miss.: "Restraint."

Dr. W. G. Venzke, The Ohio State University, Columbus: "Reproductive Hormones in Farm Animals." Discussion by Dr. M. G. Fincher.

Dr. G. A. Railsback, Cutter Laboratories, Chicago, Ill.: "Anaplasmosis."

Dr. B. T. Simms, chief, U. S. BAI.: Address.

Mr. W. E. Alston, animal husbandman, Agricultural Experiment Station, Auburn: "Artificial Insemination."

The chairman of the clinics was Dr. I. S. McAdory. Chairmen of the large animal sections were Drs. W. J. Gibbons, J. F. Hokanson, and A. M. Wiggins. Chairmen of the small animal sections were Drs. J. E. Greene and N. D. Crandall. Dr. R. S. Sugg, Dr. A. A. Leibold, and Dr. T. C. Fitzgerald each acted as chairman for one day of the conference. Dr. W. S. Bailey conducted a campus tour preceding the fraternity alumni dinners on the first evening of the conference.

Arkansas

September Meeting.—A steak fry was the feature of the September 27 meeting of the Arkansas Veterinary Medical Association, held in the Gorge at Hot Springs. Plans for the annual meeting of the state association to be held Jan. 15-16, 1948, are under way, and program suggestions are solicited.

s/T. D. Hendrickson, *Secretary.*

California

Foot Rot in Deer.—Numerous deaths among deer in the north central part of California have been traced to foot rot, according to state veterinary authorities. Hunters report that some deer being bagged are so badly infected that they cannot be used for meat purposes.—*Calif. Wool Grower, Sept. 2, 1947.*

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"Doctor Bob's" Cattle.—I recently spent a day with Robert Vanderhoof (his father calls him "Doctor Bob"—Bob is a graduate veterinarian) at the Vanderhoof mountain pasture in Sequoia National Forest—7,700 ft. altitude. They have a nice bunch of calves, with both

"Comprest" and "Conventional" types in evidence. Their program of crossing these two types of Herefords is interesting, and the quality of the cattle and sale results are highly encouraging.—*Raymond Husted in Western Livestock J., Sept., 1947.*

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Dr. Golden Retired.—After thirty years with the U. S. BAI, the last fifteen at the Los Angeles stock yards, Dr. C. E. Golden [MCK '07] was placed on the retired list. He has made many friends among those connected with the Los Angeles yards.—*Western Livestock Journal.*

Georgia

Short Course for Veterinarians.—The third annual short course for veterinarians was held in the Agricultural Building on the campus of Baldwin Agricultural College, Tifton, Sept. 23-24, 1947. Following an address of welcome by President G. Donaldson, the scientific program was presented.

Mr. George H. King, director, Georgia Coastal Plain Experiment Station, Tifton: "What the Experiment Station Is Doing for Georgia."

Dr. T. J. Jones, dean, College of Veterinary Medicine, University of Georgia, Athens: "The Georgia College of Veterinary Medicine."

Dr. M. H. Roepke, University of Minnesota, St. Paul: "Hormones in Veterinary Practice," and "The Present Status of Ketosis Research."

Dr. Guy A. Railsback, Cutter Laboratories, Chicago, Ill.: "Swine Enteritis," and "Baby Pig Diseases."

Dr. R. O. Barnes, Claxton: "Prearranged Practice."

Dr. Walter J. Gibbons, Alabama Polytechnic Institute, Auburn: "Practice Builders," and "X Diseases of Cattle."

Dr. L. E. Starr, Georgia Department of Public Health: "The Georgia Department of Public Health's Program against Swine Brucellosis."

Mr. B. L. Southwell, head, Department of Animal Husbandry, Georgia Coastal Plain Experiment Station, Tifton: "Recent Advances in Animal Husbandry."

A round-table discussion, with comments by Drs. E. E. Chambers, C. C. Von Gremp, R. A. Houston, and other speakers on practice problems, closed the program.

AVMA films, "Bovine Surgery" and "Swine Brucellosis," were shown, through the courtesy of Dr. E. R. Frank, Kansas State College, and the Department of Animal Pathology, Purdue University.

Members of the short course attended a barbecue and stag party at the Tifton Country Club on September 23.

Illinois

Northern Association.—The program of the fall meeting of the Northern Illinois Veterinary Medical Association held at the Hotel Faust in Rockford, September 10, was announced as follows:

Dr. T. T. Chaddock, Grafton, Wis.: "Experiments in the Control of Fur-Bearing Animal Diseases on the North American Continent."

Dr. A. L. Klecker: "Recent Research in Small Animals and Chemotherapy."

Dr. W. D. Daugherty, Indianapolis, Ind.: "Development and Improvement of New Chemotherapeutic Agents."

Dr. J. T. Schwab, Madison, Wis.: "Postparturient Problems in Dairy Cattle." Discussion by Dr. G. W. Jensen, Antioch.

At the banquet, Dr. T. T. Chaddock demonstrated the selection and manufacture of fur coats, and a film on foot-and-mouth disease in Mexico was shown through the courtesy of W. B. Holmes.

The officers of the Association are Dr. C. R. Collins, Dixon, *president;* Dr. P. T. Gambrel, Winnebago, *president-elect;* and Dr. C. L. Smith, Sycamore, *secretary-treasurer.*

s/C. L. SMITH.

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Veterinary College at Urbana Not to Open this Fall.—The University of Illinois College of Veterinary Medicine will not open this fall, according to Dean Robert Graham.

Before students can be accepted, it will be necessary for the Illinois state legislature to reappropriate funds to construct buildings for the new veterinary college. Animal operating rooms, dissecting laboratories, hospital facilities, and specialized equipment will also have to be provided.

The University authorities have been studying various proposals for getting the professional program under way. As yet no plan has been devised that will make it possible to train more than a handful of students without new veterinary buildings.

Although the great need of the Illinois livestock industry for additional veterinary practitioners is recognized, it is believed that the best interests of Illinois agriculture will not be served by attempting to train substandard veterinarians with the present inadequate facilities. The professional curriculum in veterinary medicine will therefore have to be delayed until funds are appropriated to provide for the buildings.

In the meantime, the College's public service, extension, and research activities on animal diseases will be expanded, Dean Graham stated. The preveterinary curriculum will also continue to be offered, enabling students to qualify for professional training when it becomes available.

In order to expand research and graduate teaching, the University has purchased a building at 805 W. Pennsylvania, Urbana, for temporary research laboratories and office quarters. The main office of the College of Veterinary Medicine, as well as research laboratories which do not involve the use of animals,, will be housed in this building. No animals will be kept on the premises.—*University of Illinois Release.*

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Faculty Additions at University.—Dr. L. E. Card, well-known poultry pathologist and author, has been named head of the Department of Animal Science at the state university to succeed Dr. W. E. Carrol who became associate director of the Illinois Agricultural Experiment Station. Dr. Card has been with the university for twenty-five years and is a prominent figure in the development of the state's poultry industry.

Dean Robert Graham of the College of Vet-

erinary Medicine has announced the appointment of four new staff members. Dr. Morris S. Cover (UP '38), formerly associate professor of anatomy and physiology, Kansas State College, is to be assistant professor of veterinary anatomy and histology. Dr. Elmer A. Woelffer (CORN '31), formerly veterinarian and manager of H. P. Hood and Sons Farms, Boston, Mass., has been appointed professor of veterinary extension. Dr. James R. Wadsworth (UP '44), formerly a veterinary inspector in the U. S. BAI and assistant instructor in veterinary surgery at the University of Pennsylvania, will be an assistant in veterinary anatomy. Dr. Samuel C. Schmittle (OSU '47), who has been conducting research on Newcastle disease at the University, will be an assistant in veterinary pathology and hygiene.

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Cliff Carpenter Honored.—Dr. Cliff D. Carpenter, president of the Institute of American Poultry Industries, has been given an honorary life membership in the National Turkey Federation in recognition of his services to the country's turkey growers and for the Institute's aid to the turkey industry.

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Donates to Swamp Fever Fund.—The Hawthorne Race Track of Chicago has donated $11,253.00 toward the fund that is being collected by the Thoroughbred Racing Association of New York for the study of equine infectious anemia, reported to be spreading among the New England race tracks. It is said that 47 clinically diagnosed cases out of 900 horses occurred at the Rockingham Park (N. Y.) track.

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Biochemicals Available Commercially. — Armour Laboratories, Chicago 9, have made available, for investigational use, the following biochemicals: bovine plasma albumin, crystallized; fraction V (bovine albumin); fraction I (bovine fibrinogen); trypsin, crystallized; chymotrypsin, crystallized; pepsin, crystallized; ribonuclease, crystallized; lysozyme, crystallized; and adenosine triphosphate.

Research workers will be saved the expenditure of much time and money by this undertaking. An annotated bibliography on bovine plasma albumin, prices, and other particulars may be obtained from Biochemical Sales Research, Chemical Research and Development Department, Armour Laboratories, Chicago 9.

Indiana

Public Relations Program.—On March 1 of this year, after a year's effort in laying the groundwork and building a fund, the Indiana Veterinary Medical Association entered upon a continuous public relations program, made possible by subscriptions from veterinarians throughout the state. The program has been directed at the people of Indiana through daily and weekly newspapers and radio stations. In the first six months, nearly 800 articles on veterinary medicine and veterinarians appeared in nearly 200 daily and weekly newspapers throughout the state. All publicity has been highly ethical, emphasizing educational facts rather than personalities and virtually all of it bearing on a central theme, the essential rôle of the veterinarian as a guardian of public health.

The publicity has included coverage of district meetings, special events, and general articles on rabies, brucellosis, etc. Two powerful radio stations, WIBC, Indianapolis, and WOWO, Fort Wayne, are carrying regular broadcasts by members of the IVMA.

The program is under the direction of Mrs. Florence Herz Stone, public relations counselor and experienced newspaper woman, the public relations committee of the IVMA, and is directly supervised by Dr. George L. Clark, state president. Mrs. Stone demonstrated her ability by handling publicity and public relations on six successive IVMA state conventions which produced formerly unheard-of coverage among newspapers throughout the state.

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Short Course.—Purdue University held its thirty-fifth annual short course for veterinarians on October 1 to 3 at Lafayette. In addition to clinics on large animals, sheep, swine, and poultry, the following scientific program was presented.

Dr. F. N. Andrews, Department of Animal Husbandry, Purdue University: "Endocrine Therapy in Veterinary Medicine."

Dr. J. T. Schwab, Wisconsin state veterinarian, Madison: "Postparturient Complications in Dairy Cattle."

Dr. C. A. Brandly, University of Wisconsin, Madison: "Virus Diseases of Poultry."

Dr. B. H. Edgington, Animal Disease Research Laboratory, Reynoldsburg, Ohio: "Observations on the Use of Hog-Cholera Vaccine."

Dr. F. Cross, Colorado A. & M. College, Fort Collins: "Diseases of Sheep."

Dr. B. T. Simms, chief, U. S. BAI, Washington, D. C.: "Foot-and-Mouth Disease in Mexico," and "The Future of Brucellosis Control."

Dr. F. L. Walkey: "Foot-and-Mouth Disease in Indiana in 1914" (lantern slides).

Dr. A. G. Danks, New York State Veterinary College, Ithaca, N. Y.: "Some Surgical Diseases of Horses."

Dr. S. R. Damon, Indiana State Board of Health, Indianapolis: "Brucellosis in Relation to Public Health."

Dr. R. L. West, Minnesota state veterinarian, St. Paul: "Brucellosis Control Activities in Minnesota." Discussion by Dean H. J. Reed, School of Agriculture, Purdue University.

Mr. Randolph Core, Franklin: "Brucellosis Control from the Dairyman's Viewpoint."

At the banquet closing the program sessions, Dr. J. G. Hardenbergh, executive secretary of the AVMA, Chicago, spoke on "Affairs of the American Veterinary Medical Association." President F. L. Hovde of Purdue addressed the group, and the Men's Glee Club of the University furnished the musical program.

s/C. R. Donham

Iowa

Dr. Garrett Appointed State Veterinarian.—On September 2, Dr. H. U. Garrett (KSC '14) of St. Charles assumed his duties as chief, Division of Animal Industry, Iowa Department of Agriculture, succeeding Dr. C. C. Franks of Des Moines, who resigned on August 1. Dr. Garrett had practised in St. Charles for thirty-

four years, until his retirement from active work last year. He brings to his new post a wide knowledge of the problems of the Iowa livestock producer.

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Eastern Association.—The thirty-fourth annual meeting of the Eastern Iowa Veterinary Association was held at the Hotel Montrose, Cedar Rapids, on Oct. 14-15, 1947. Following the address of President C. C. Graham, the technical program was presented.

Dr. George P. Hopson, DeLaval Separator Company, New York, N. Y.: "Mastitis in Cattle." Discussion led by Dr. R. B. Helming of Cresco.

Dr. W. D. Daugherty, Pitman-Moore Co., Indianapolis, Ind.: "Acetonemia in Cattle." Discussion led by Dr. J. C. Carey, West Liberty.

Dr. I. E. Hayes, Waterloo: "Some Phases of Light Horse Practice." Discussion led by Dr. Frank M. Wilson, Mechanicsville.

Dr. H. D. Bergman, dean, Veterinary Division, Iowa State College, Ames: "The Current Situation in Veterinary Education."

Dr. John S. Bryant, president, Iowa Veterinary Medical Association, Mt. Vernon: "Your State Association."

Dr. B. T. Simms, chief, U. S. BAI, Washington, D. C.: "The Control of Brucellosis on a National Basis."

Dr. S. H. McNutt, University of Wisconsin, Madison: "Newer Findings in Bovine Brucellosis."

Dr. J. W. Cunkelman, Fort Dodge Laboratories, Fort Dodge: "The Use of Hormones in Large Animals." Discussion led by Dr. Frank Breed, Lincoln, Neb.

Dr. G. E. Underbjerg, University of Wisconsin, Madison: "Certain Factors Affecting Nutrition of Cattle." Discussion led by Dr. J. V. Lacroix, Evanston, Ill.

Mr. Rex B. Conn, editor, Cedar Rapids Gazette: "Farm Conditions in Europe."

Dr. W. L. Andrews, Milton: "Sheep Practice." Discussion led by Dr. Fred J. Crow, Iowa City.

Dr. M. A. Emmerson, Iowa State College, Ames: "Bovine Sterility." Discussion led by Dr. F. L. Roach, Preston.

Dr. L. M. Hutchings, Purdue University, West Lafayette, Ind.: "Virus-Type Baby Pig Disease." Discussion led by Dr. Joe W. Giffee, U. S. BAI, Cedar Rapids.

Dr. Darrell T. White, Williamsburg: "Swine Practice Problems." Discussion led by Dr. Warren E. Bowstead, Lowden.

Other guest speakers were Dr. J. A. Barger, veterinarian in charge, U. S. BAI, Des Moines; the Hon. Harry D. Linn, Secretary, Iowa Department of Agriculture, Des Moines; Dr. H. U. Garrett, chief, Division of Animal Industry, Iowa Department of Agriculture, Des Moines; and, at the banquet session, Mr. Herbert S. Stamats, president, Cedar Rapids Chamber of Commerce.

Participating in question-box hours were Drs. J. V. Lacroix, Frank Breed, Ashe Lockhart, A. H. Quin, T. W. Munce, J. D. Ray, L. E. Willey, and H. C. Smith.

A complete and varied program of entertainment was arranged for the ladies.

s/LAURENCE P. SCOTT, *Secretary.*

Southwestern Association.—The fall meeting of the Southwestern Iowa Veterinary Medical Association was held on Oct. 7, 1947, in Omaha, Neb., through the courtesy of the Livestock Exchange of the city. The following program was presented.

Dr. E. B. Ingmand, Red Oak, Iowa: "The Rôle of Dehydrated Alfalfa in Nutrition."

Dr. Spencer, Omaha, Neb.: "Benzenehexachloride and Other Parasitic Agents."

Dr. Frank Wilson, Guthrie Center, Iowa: "Our Future as I See It." Discussion led by Dr. G. A. Hawthorne, Clarinda, Iowa.

The following regulatory officials spoke on federal and state veterinary affairs: Dr. H. U. Garrett, state veterinarian, Des Moines, Iowa; Dr. J. A. Barger, U. S. BAI, Des Moines, Iowa; Dr. Anderson, state veterinarian, Lincoln, Neb.; and Dr. J. E. Peterman, U. S. BAI, Lincoln, Neb.

Veterinarians had luncheon at the Livestock Exchange Building and their wives attended luncheon at the Omaha Athletic Club.

s/M. R. BEEMER, *Secretary.*

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Two New Staff Members at Fort Dodge.—Dr. J. W. Cunkelman (MSC '38), formerly in charge of the ambulatory clinic in the School of Veterinary Medicine, Michigan State College, East Lansing, has joined the Fort Dodge Laboratories sales department as a special representative.

Dr. J. R. Dick (OSU '42), until recently an assistant professor of veterinary medicine at The Ohio State University, Columbus, will be on the biological laboratory staff at Fort Dodge.

Kansas

Meat from Kansas.—The National Live Stock and Meat Board stresses the importance of Kansas as a producer of meat animals: cattle, hogs, and sheep. Not counting breeding and dairy stock, Kansas ranchers and farmers drew down $339,670,000 for this class of livestock last year. Cattle brought $251,627,000, hogs $72,093,000, and sheep $15,950,000. In producing the 22,961,000,000 lb. marketed last year, Kansas led 39 other states, or was seventh from the top.

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Six-Year Course Planned.—If action now pending in the Kansas State College faculty is approved, preveterinary students entering the College this year and hereafter will spend six years earning the D.V.M. degree. The proposed curriculum requires two years in the School of Arts and Sciences and four in the veterinary school. The Arts and Science faculty has approved the recommendation; it will be presented to the general faculty for final action. —*Kansas State College News Bureau.*

Kentucky

Cornelius C. nn (CVC '91).—On the heels of "Bluegrass Vet" in the *Saturday Evening Post* delineating the lives of the Hagyard's of Lexington comes additional lore on the same general subject in the *Blood Horse*, celebrating the eighty-fifth birthday of Dr. C. Cann, also of Lexington. He was graduated by the Chicago Veterinary College in 1891 and forthwith be-

gan to endear himself to the classiest clientèle of the racehorse circle with his firing irons, dental float, castrating knife, a lot of skill, common sense, and honest dealing. He is credited with having fired, floated, and castrated more dollars worth of aristocratic horse flesh than any other living veterinarian. Although Dr. Cann has always voted in Lex-

—*Courtesy of the Blood Horse*

Dr. Cornelius Cann (CVC '91) native Kentucky veterinarian at the age of 85. His castrating knife made geldings out of three winners of the Kentucky Derby besides now a few "place and show" entries of that annual classic.

ington, his professional peregrinations took him from Mexico to Canada, Florida to Chicago, and way stations wherever notable race horses were mobilized to race, or on farms where they were raised. The Doctor, who is essentially a specialist in the racehorse field, is one of those rare graduates who did not desert dentistry but rather won considerable prestige and fame through his skill in that art.

The JOURNAL joins *Blood Horse* in felicitating our octogenarian colleague and member whose career unconsciously boosted the profession's public relations as the article (*loc. cit.*) testifies.—*Editors.*

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Star over Lexington. — To find out what makes Kentucky tick besides the famous song of Stephen Foster, read "Bluegrass Vet" (*Saturday Evening Post, 220,* Sept. 20, 1947: 34-35 and 124-131).

Bluegrass Vet is mostly an abridged biography of the Hagyard family—three generations—and their work among champions of the turf since the 1870's when the first Hagyard came out of Toronto and quietly founded what the author, Hambla Bauer, is inspired to call "America's flossiest veterinary practice." The millions who will get a glimpse of the operations of veterinary medicine through reading this fascinating article ought to be a thrill to the rooters for better public relations. It's a well-told story about a firm of competent veterinarians who know horses, now headed by C. E. Hagyard (ONT '24), of great horses and anecdotes about treating their maladies, of palatial horse-breeding farms and their veterinary problems, and of America's foremost horsemen. The theme is written around 145 East Short Street, Lexington, where the Hagyard's have held forth since 1875. Woven into the article is the work of W. W. Dimock and E. W. Caslick, and the younger set—Arthur Davidson and William McGee—who have been added to the Hagyard staff in recent years. The most colorful figure, however, is the retired partner, Ed. Hagyard (ONT '88), onetime resident veterinarian for Senator Marcus Daly's 62,000-acre breeding farm in Montana which he (Ed.) left to return to Lexington in 1902 when Charlie, the present head of the firm, was but 1 year old.

Bluegrass Vet is the kind of reading material that makes the "vet" proud and the layman wonder.

Massachusetts

Association Meeting.—The September 17 meeting of the Massachusetts Veterinary Association was held at the Hotel Highland in Springfield. The speakers were Dr. M. J. Fincher of Cornell University, who spoke on cattle diseases, and Dr. Joseph DeVita, New Haven, Conn., speaking on animal endocrinology. Members were afforded the opportunity of attending the Eastern States Exposition which was held in Springfield through the week of September 14 to 20.

s/C. L. BLAKELY, *Acting Secretary.*

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Thayer and Winchester.—Many living veterinarians recall the intrepid W. F. Winchester, state veterinarian and AVMA president of 1901-1902, who was an assistant of E. F. Thayer of Newton, the sixth AVMA president. Thayer was a pre-Civil War livestock sanitarian of outstanding fame. That goes to show how young we are. See June, 1878, *American Veterinary Review*, page 176-177. s/ANON.

Michigan

Southeastern Association.—In the September 9 meeting of the Southeastern Michigan Veterinary Medical Association, held at the Detroit Veterinary Supply House, the group unanimously agreed to limit advertising space in the classified sections of telephone books to one-half inch.

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Michiana Association. Approximately 50 veterinarians and their wives attended the September 11 meeting of the Michiana Veterinary Medical Association, held in Constantine, Mich. Dr. Glen Reed of Lansing discussed the relationship of the extension service to the practising veterinarian.

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Western Association.—Ninety-six veterinarians and their wives enjoyed a dinner at the Charlotte Country Club before the September 8 meeting of the Western Michigan Veterinary Medical Association. Dr. A. E. Erickson showed moving pictures on large and small animal practice at his hospital following the dinner, and a general discussion was held.

s/FRANK THORP, JR., *Resident State Secretary.*

Minnesota

Southern Association.—The October 8 meeting of the Southern Minnesota Veterinary Medical Association was held at Mr. Jay C. Hormel's home, with dinner served at the Austin Country Club. Guests inspected the swine improvement project on the farm. Dr. A. H. Schmidt, Triumph, spoke on "Feedlot Trouble among Feeding Calves." Dr. W. L. Boyd of St. Paul discussed "Feedlot Trouble among Sheep."

s/KARL KNOCHE, *Secretary.*

—*The Hormel Farmer.*

Alice Soucek, 16, and her grand champion trio at the 4-H Lamb Club, Austin, Minn., Fair, Aug. 5-10, 1947.

Missouri

Kansas City Association.—The September 16 meeting of the Kansas City Veterinary Medical Association was held at the Hotel Continental. "Nutritional Diseases of Animals," with special reference to dairy and canine nutritional problems, was discussed by Dr. R. E. Lubbenhusen, manager, Disease Control Laboratories, Ralston Purina Company, St. Louis. The sound film, "Battling Brucellosis," was shown.

s/GAIL B. SMITH, *Secretary.*

New Jersey

Veterinarian Dies of Rabies.—Dr. Sheldon Scoville (API '43), Maplewood, died on Oct. 2, 1947, of rabies, the eighth human case in the state since 1941. A former member of the Veterinary Corps, Dr. Scoville was employed by the Newark Dog and Cat Hospital. While examining a Newfoundland dog on September 13, superficial bites inflicted minor damage to the right middle finger and the left ear. Local treatment was applied to the wounds. The dog showed no aggressiveness or other indication of typical rabies, but when he died on the following day, the brain was removed and Negri bodies were found in the nerve cells.

Pasteur treatment was begun on Dr. Scoville on September 15 and repeated daily through September 28, when he began to show recognizable symptoms of rabies until his death on October 2.

The attending physician has assumed that the bite on the ear was the means of introduction of the virus so near the central nervous system that it reached the brain before injections of vaccine had produced immunity.

It is the policy of the New Jersey Department of Health to recommend the control of rabies through the vaccination of all dogs in areas where the disease is endemic. The vaccinating is done on a voluntary basis.

s/J. S. MCDANIEL, *Veterinarian in Charge, New Jersey Department of Health.*

New York

New York City Association.—On October 1, the Veterinary Medical Association of New York City held its meeting at the Hotel Pennsylvania. Dr. David L. Coffin, pathologist, Angell Memorial Hospital, Boston, Mass., spoke on "Pathology of So-called Acute Tonsillitis of Dogs—Comparison with Hepatitis Contagiosa Canis (Rubarth), A Result of Four Cases." Dr. Valto M. Klemola, chief of the Veterinary Medical Institute of the University of Helsinki, Finland, spoke on veterinary medicine in Finland.

s/C. R. SCHROEDER, *Secretary.*

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Cornell Nutrition Conference.—A nutrition conference for feed manufacturers was held Nov. 6 to 8, 1947, at Syracuse and Ithaca, by the departments of animal and poultry husbandry, New York State College of Agriculture, and the School of Nutrition, Cornell University, in coöperation with the American Feed Manufacturers' Association. The program consisted of lectures, informal discussions, and demonstrations.

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Two-Mile Pacing Race.—The $40,000 two-mile, widely heralded as an unusual departure in harness-horse circles, was won by April Star in 4 : 20. The race is designated The Nassau Two-Mile Pace. Place, Roosevelt Raceway. Date, Sept. 5, 1947. The time at the eight quarters were, respectively: 0 : 33, 1 : 07 2/5, 1 : 39 3/5, 2 : 10, 2 : 42 2/5, 3 : 14 2/5, 3 : 37 2/5, and 4 : 20. There were 10 entries.

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Repressive Court Decision.—Guernsey (and Jersey) milk producers received what seems to be an unfair blow through a decision of the state Court of Appeals over-ruling a lower court which gave Guernsey milk the advantage of a price differential on account of its high percentage of butterfat. The Guernsey breeders have fought for eight years for permission to sell milk on its merits. Says the *Jersey Bulletin*, "The low percenters hail the decision as a victory for them."

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Swamp Fever Scare.—The Thoroughbred Racing Association of New York City is girding to launch a campaign against the outbreak

of swamp fever that is reportedly prevalent among horses of the New England race tracks. Because of the high value of the stricken horses, owners, trainers, and track officials have joined in an appeal for funds to be turned over to the research branch of the Grayson Foundation for the development of a better means of diagnosis, an effective treatment, and a preventive vaccine—chores that have baffled research scientists for many years.

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Armed Wins the $100,000 for Charity.—Before a crowd of 51,000 at Belmont, September 27, Calumet Farm's *Armed* added a hundred thousand to his prior earnings of $642,900 by an easy victory over King Ranch's *Assault*. It was a no-betting match race. Time, 2 : 02 4/5. A notable sequel of the event was the donation of the winnings to charity by Owner Warren Wright: $30,000 to the Damon Runyon Cancer Fund, $30,000 to the Red Cross, and the remainder to various charities.

North Carolina

Sentenced for Killing Dog.—John Ransome Barefoot, a man whom police officers testified they could not say "one single good thing about," was sentenced to serve twelve to eighteen months for the brutal killing of an old hound dog. Barefoot allegedly cut the dog's throat from ear to ear and left it to die. The legal charge was cruelty to animals.

Highlight of the trial, held at the Harnett Superior Court in Lillington, N. Car., on Sept. 9, 1947, was a eulogy on dogs given by Judge Luther Hamilton, during which he told Barefoot, who was sobbing and begging for mercy, that "I'm certainly not going to stand for this sort of thing. Dogs can't talk. They can't tell us the wrongs we do to them. You've got to pay for this crime."—*From The News and Observer, Raleigh, N. Car.*

Ontario

Pitman-Moore Opening.—A formal opening of the Pitman-Moore Company of Canada, Ltd., at 132 Carden St., Guelph, was announced on Sept. 22, 1947. The company will serve the graduate veterinarians of Canada.

Pennsylvania

Bucks-Montgomery Association.—On September 10, the Bucks-Montgomery Veterinary Medical Association resumed its monthly meeting scheduled at Boylestown, with Dr. Mark Allam of Philadelphia as guest speaker. He presented his convention paper, "Some Clinical Observations on the Prevention and Treatment of Shock by Intravenous Gelatin." The Association met in Doylestown on October 8 to hear Dr. John Beck speak on the "Problems of Practice." s/J. G. SHUTE, *Secretary.*

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Keystone Association.—A panel discussion on "The Significance of Mastitis" was the feature of the Keystone Veterinary Medical Association's opening meeting on September 24 at Pearson Hall of the University's veterinary school. Dr. John W. Walker was moderator and panel members were Drs. Roy Davenport, John W. Beck, and D. W. Crisman.

s/RAYMOND C. SNYDER, *Secretary.*

Rhode Island

New England Association.—The thirteenth annual convention of the New England Veterinary Medical Association was held at the Sheraton-Biltmore Hotel in Providence on October 2 and 3. Following President Howard Ferguson's address, the scientific program was presented.

Dr. David Hopkins, Brattleboro, Vt.: "Disease Problems of Cattle."

Dr. Herbert Knutson, Entomology and Plant Industry, Department of Agriculture and Conservation, Rhode Island: "Common Parasites in Veterinary Practice."

Dr. John D. Gadd, Towson, Md.: "Side-to-Side Intestinal Anastomosis," "Removal of Testicular Tumor," "Endotracheal Anesthesia," and "Resection of Soft Palate" (moving pictures and discussion).

Dr. Clarence D. Stein, U. S. BAI, Washington, D. C.: "Swamp Fever" (with moving picture). Local aspects discussed by Drs. W. H. Shannon, Massachusetts, Joseph S. Barber, Rhode Island, and Robinson W. Smith, New Hampshire.

Dr. Wilson R. Haubrich, Claremont, N. H.: "Sterility in Cattle."

Dr. Richard Gilyard, Waterbury, Conn.: "Cattle Practice."

Dr. Gerry B. Schnelle, Angell Memorial Animal Hospital, Boston, Mass.: "Clinical Aspects of Nephritis."

Dr. John P. Delaplane, Rhode Island State College, Kingston: "Control of Coccidiosis in Chickens."

The clinical programs were held in the State Armory, Pawtucket.

Governor John O. Pastore of the state of Rhode Island was a guest at the banquet for members and their wives, and also Dr. Raymond G. Bressler, director of the Department of Agriculture and Conservation of the state. Dr. Harry L. Phillips spoke on "Obedience Training." s/C. L. BLAKELY, *Secretary.*

Utah

Dr. Blake Goes to Mexico City.—Dr. G. E. Blake, veterinarian for the Utah Fur Breeders Coöperative, has resigned to accept a position with the U. S. BAI with station at Mexico City, D.F., where he is engaged in foot-and-mouth disease work.

Wisconsin

Southeastern Association.—Professor C. A. Herrick of the zoölogy department, University of Wisconsin, spoke on "Parasitology" at the September 25 meeting of the Southeastern Wisconsin Veterinary Association, held at the Hotel Waupun, Waupun.

s/J. O. McCOY, *Secretary.*

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Northeastern Association.—The tenth annual meeting of the Northeastern Wisconsin Veterinary Medical Association was held on the afternoon and evening of October 3 at the New London Golf Club. Veterinarians and their wives enjoyed a dinner and entertainment as well as the scientific program.

s/WILLIAM MADSON, *Secretary.*

Dr. O'Reilly Reëlected.—Dr. Lee L. O'Reilly (CVC '12) of Merrill, one of the foremost figures in the development of the fur-farming industry in the United States, was reëlected president of the American Fur Breeders' Association at the annual convention at Milwaukee in June.

Wyoming

State Laboratory Personnel Completed.—The staff of the newly established Wyoming State Veterinary Laboratory now includes Dr. J. F. Ryff, director, Dr. Robert Learmonth, and Dr. Mary Hammond. Mr. A. J. Luzzio is employed as bacteriologist. The laboratory will investigate diseases of livestock under the direction of the Wyoming Livestock and Sanitary Board through Dr. G. H. Good, its executive officer and state veterinarian.

s/J. F. RYFF, *Director.*

FOREIGN

Australia

Veterinary Education.—The demand for veterinary graduates was never greater than at present. The immediate shortage of qualified men is so acute that attention is being focused once more on the existing facilities for veterinary training.—*The Australian Veterinary Journal, June, 1947.*

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Government Control of Eggs.—The Australian government maintains 100 per cent control of egg production and prices. Every egg laid in Australia automatically becomes the property of the government's marketing board.—*From U. S. Egg and Poultry Magazine.*

China

Poultry Situation in China.—Raising poultry was always a small-flock, family, backyard affair, yet eggs stood second or third in total foreign trade. Most of this has been lost and the chances of restoring the industry are remote. A movement to rehabilitate the industry did not convince the authorities as to the need, since for centuries raising poultry in China has been regarded as an unimportant family matter. "Unfortunate," says Zue-Tze Tsang in *World's Poultry Science Journal* (July-September, 1947).

Hungary

Help From the U.S.A.—The Ministry of Agriculture has received nine cases of hatching eggs from the American Northwest, which have been incubated and allocated to qualified farms as the seeds of a rehabilitated poultry industry which was war-wrecked. Another consignment of eggs of high-producing poultry and bronze turkeys arrived from New York by airways *via* Vienna, and were trans-shipped by special carrier to Budapest. The shipments were planned and handled by the Poultry Branch of the USDA.

India

Poultry Situation.—While India possesses some purebred Rhode Island Reds, White Leghorns, and Black Minorcas, the bulk of its poultry scarcely exceeds the quality of jungle fowl, without distinct size or type. The prewar price of eggs, 4 to 12 cents a dozen, rose to 80 to 90 cents during the war. The production was thrown out of balance by the influx of troops. Chickens that once sold for 6 to 8 cents a piece went to troops at attractive prices that diminished the country's poultry far below the 58 million laying hens. Though India has about $5\frac{1}{2}$ million ducks, turkeys, guineas, and geese are not important.

Because the bulk of poultry is kept under primitive conditions, the situation is not promising.—*From the Ministry of Agriculture and Fisheries, London, in World's Poultry Science Journal.*

Korea

Training for Korean Veterinarian.—The Pitman Moore Company, Zionsville, Ind., will train Dr. Byung Hack Youn, first Korean veterinarian to study in an American laboratory, for one year in special research, as of Sept. 15, 1947. While the company is subsidizing this special program, the plan was suggested by Dr.

Benjamin D. Blood, advisor to the Bureau of Veterinary Affairs, Department of Public Health and Welfare, who became interested in Mr. Youn's work. Dr. Youn, formerly a student of veterinary medicine at Suwon Agricultural College, will work with Drs. W. S. Gochenour in pathology and S. H. Regenos in bacteriology.

Dr. Blood writes, "Veterinary education in Korea is at a low level when compared with that of America and other Western countries ....commercial livestock production is not practiced here as in the West....We believe that the veterinarians of this country can do much to stimulate livestock production and that they can also foster a program for increased and improved veterinary service....Physicians, sanitarians, and other professional men are being sent to the U.S. for graduate work with financial backing of the Rockefeller Foundation, yet veterinarians are not provided for by these funds. Even a Korean veterinarian with money can not pay his own way, because the Korean yen has not yet been given international status....The veterinarians of Korea and their American advisors are deeply grateful to the company for making it possible."

Philippine Islands

Dr. Ferriols Director of BAI.—Dr. Vincente Ferriols (ISC '12), formerly head of the Animal Disease Control Division, Philippine Bureau of Animal Industry, was appointed director of the Bureau in May, 1947, culminating thirty-five years of service.

Dr. Vincente Ferriols

Dr. Ferriols, upon graduation from Iowa State College in 1912, worked in all parts of the islands in campaigns against rinderpest and other communicable diseases. He became chief of the Veterinary Research Division of the now defunct Bureau of Agriculture and headed the Animal Disease Control Division when the BAI was created in 1930.

A member of the National Research Council of the Philippines, the Philippine Veterinary Medical Association, and the AVMA, he has contributed greatly to the literature on disease control and veterinary history of that country.

s/M. M. Delgado, *Manila.*

Venezuela

Health Certificates for Import Poultry.—The American Embassy has warned American exporters of chickens and eggs to comply with Venezuelan laws, in respect to obtaining permission from the Minister of Agriculture for each consignment. The only requirement for eggs is that they were laid by hens free of pullorosis. Chickens must be officially declared (1) negative to tuberculosis and pullorosis, (2) vaccinated against typhoid, laryngotracheitis, and infectious bronchitis, and (3) free of coccidiosis. The declaration must also certify that the chickens have not been exposed to cholera or pox for six months prior to shipment.—*World's Poultry Science Journal.*

STATE BOARD EXAMINATIONS

Oklahoma—The Oklahoma Board of Veterinary Medical Examiners will hold its next examination on January 20-21, 1948, in the office of the State Department of Agriculture, State Capitol, Oklahoma City, Okla. Applications should be filed in advance with Dr. N. L. Astle, secretary-treasurer, Box 364, Blackwell, Okla.

COMING MEETINGS

University of Missouri. Annual Short Course for Veterinarians. University of Missouri, Columbia, Nov. 3-5, 1947. A. J. Durant, Dept. of Veterinary Science, University of Missouri, chairman.

Mississippi Valley Veterinary Medical Association. Hotel Pere Marquette, Peoria, Ill., Nov. 6-7, 1947. H. R. Hornbaker, 759 E. Main St., Galesburg, Ill., secretary.

Midwest Small Animal Association. Hotel Burlington, Iowa, Nov. 13, 1947. Wayne H. Riser, 1817 Church St., Evanston, Ill., secretary.

Southern Veterinary Medical Association. Roosevelt Hotel, New Orleans, La., Nov. 17-19, 1947. A. A. Husman, 320 Agricultural Bldg., Raleigh, N. Car., secretary.

Interstate Veterinary Medical Association. Martin Hotel, Sioux City, Iowa, Nov. 20-21, 1947. H. C. Smith, Box 838, Sioux City 5, Iowa, secretary.

American Society of Animal Production. Hotel Sherman, Chicago, Ill., Nov. 28-29, 1947. W. G. Kammlade, 110 Stock Pavilion, University of Illinois, Urbana, secretary.

United States Live Stock Sanitary Association. Annual Meeting. La Salle Hotel, Chicago, Ill., Dec. 3-5, 1947. R. A. Hendershott, 330 Oak Lane, Trenton, N. J., secretary.

Nebraska State Veterinary Medical Association. Annual Meeting. Cornhusker Hotel, Lincoln, Neb., Dec. 11-12, 1947. L. V. Skidmore,

College of Agriculture, Lincoln 1, Neb., secretary-treasurer.

Cornell University. Annual Conference for Veterinarians. New York State Veterinary College, Ithaca, Jan. 1-3, 1948. W. A. Kagan, New York State Veterinary College, dean.

Wisconsin Veterinary Medical Association. Annual Meeting. Park Hotel, Madison, Wis., Jan. 6-7, 1948. B. A. Beach, Wisconsin Veterinary Medical Association, Genetics Bldg., Madison 6, Wis., secretary.

Ohio State Veterinary Medical Association. Deshler-Wallick Hotel, Columbus, Ohio, Jan. 7-9, 1948. F. J. Kingma, College of Veterinary Medicine, Ohio State University, Columbus, Ohio, secretary.

Intermountain Veterinary Medical Association. Salt Lake City, Utah, Jan. 12-14, 1948. M. L. Miner, Dept. of Veterinary Science, Utah State Agricultural College, Logan, secretary.

Oklahoma Veterinary Medical Association. Skirvin Tower Hotel, Oklahoma City, Okla., Jan. 22-23, 1948. D. B. Pellette, 505 Leonhardt Bldg., Oklahoma City, Okla., secretary-treasurer.

North Carolina State College. Annual Conference for Veterinarians. North Carolina State College, Raleigh, Jan. 27-30, 1948. C. D. Grinnells, State College Station, Raleigh, N. Car., chairman.

Illinois State Veterinary Medical Association. Pere Marquette Hotel, Peoria, Ill., Jan. 28-30, 1948. A. G. Misener, 6448 N. Clark St., Chicago 26, Ill., secretary-treasurer.

Kansas Veterinary Medical Association. Topeka, Kan., Feb. 5-6, 1948. C. W. Bower, 3119 Stafford St., Topeka, Kan., secretary.

Veterinary Medical Association of New Jersey. Annual meeting. Hotel Hildebrecht, Trenton, N. J., Feb. 5-6, 1948. J. R. Porteus, P.O. Box, 938, Trenton, N. J., secretary.

Midwest Feed Manufacturers' Association. Kansas City, Mo., Feb. 19-20, 1948. J. D. Dean, Midwest Feed Manufacturers' Association, 20 W. 9th St. Bldg., Kansas City 6, Mo.

American Veterinary Medical Association. Palace Hotel, San Francisco, Calif., Aug. 16-19, 1948. J. G. Hardenbergh, American Veterinary Medical Association, 600 S. Michigan Ave., Chicago 5, Ill., executive secretary.

Small Animal Veterinary Medical Association of Southern California. Held the second Tuesday of each month. Norman L. McBride, Jr., 2204 Foothill Extension, Pasadena 8, Calif., secretary.

Chicago Veterinary Medical Association. Palmer House, Chicago, Ill., the second Tuesday of each month. Robert C. Glover, 1021 Davis St., Evanston, Ill., secretary.

Keystone Veterinary Medical Association. School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pa., the fourth Wednesday of each month. Raymond C. Snyder, N. W. Cor. Walnut St. and Copley Rd., Upper Darby, Pa., secretary.

Massachusetts Veterinary Association. Hotel Statler, Boston, Mass., the fourth Wednesday of each month. C. L. Blakely, Angell Memorial Animal Hospital, 180 Longwood Ave., Boston, Mass., secretary-treasurer.

New York City Veterinary Medical Association. Hotel Pennsylvania, New York, N. Y., the first Wednesday of each month. C. B. Schroeder, Lederle Laboratories, Inc., Pearl River, N. Y., secretary.

Saint Louis District Meetings. Roosevelt Hotel, St. Louis, Mo., the first Friday of February, April, June and November, W. C. Schofield, Dept. of Animal Pathology, Ralston-Purina Co., St. Louis 2, Mo., secretary.

Houston Veterinary Medical Association. Houston, Tex., the first Thursday of each month. Edward Lepon, Houston, Tex., secretary-treasurer.

VETERINARY MILITARY SERVICE

Colonel Stevenson Commended. — Colonel Daniel S. Stevenson, V.C., who is on duty with the Military Mission to Peru as consulting veterinarian, was recently commended by the Panamanian Minister of Agriculture and Commerce for outstanding service in coping with livestock diseases and in teaching Panamanian agriculturists the principles of modern veterinary science.—*Release from Surgeon General's Office, War Dept.*

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Research Laboratory Moved.—The veterinary research laboratory which has been located at the Robinson Quartermaster Depot, Fort Robinson, Neb., since September, 1945, has been moved to the Army Medical Center in Washington, D. C.

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Veterinary Corps Personnel Changes.—The following changes have been reported by the Veterinary Corps, U. S. Army, as of Sept. 11, 1947.

RETIRED

Colonel Edward M. Curley (UP '11), appointed to the Veterinary Corps Aug. 7, 1917; retired Aug. 31, 1947.

Colonel Isaac O. Gladish (IND '15), appointed to the Veterinary Corps Sept. 3, 1917; retired Sept. 30, 1947.

Colonel Forest L. Holycross (OSU '14), appointed to the Veterinary Corps Aug. 6, 1917; retired Oct. 31, 1947.

Colonel Ralph B. Stewart (ST JOS '16), appointed to the Veterinary Corps July 31, 1917; retired Aug. 31, 1947.

Colonel Josiah W. Worthington (KSC '17), appointed to the Veterinary Corps July 9, 1917; retired July 31, 1947.

Recalled to Duty

Captain Lloyd B. Barnes, recalled to active duty, Chicago Quartermaster Depot.

Captain Roy C. Thomas, recalled to active duty, Fort Benning, Georgia.

Captain Neal C. Batson, recalled to active duty, Fort Jackson, S. Car.

Captain David Barsky, recalled to active duty, Fort Jay, N. Y.

BIRTHS

To Dr. (KSC '42) and Mrs. Don K. Christian, 910-6th Ave. No., Moorhead, Minn., a daughter, Karen Ann, June 30, 1947.

To Capt. (OSU '45) and Mrs. Earl W. Lohmeier, 1894 47th Ave., San Francisco 22, Calif., a son, Todd, July 2, 1947.

To Dr. (CORN '37) and Mrs. Harry A. Lutvack, 465-84th St., Brooklyn 9, N. Y., a daughter, Susan Ellen, Aug. 31, 1947.

To Dr. (ISC '43) and Mrs. Richard C. Brager, 1213 St. Louis St., Springfield, Mo., a son, John Carl, Sept. 6, 1947.

MARRIAGES

Dr. Robert Wood Vesper (OSU '44), 1961 Bedford Road, Columbus, Ohio, to Miss Patricia Ann Steward, of Columbus, Ohio.

DEATHS

Robert N. Ashley (KCVC '80), 60, Los Angeles, Calif., died Aug. 23, 1947, in Pasadena, following a brief illness. Dr. Ashley was a native of Nebraska. Since 1919, he had been with the U. S. BAI, engaged in dourine testing in Arizona and inspection on the Los Angeles force.

***Franklin C. Blakély** (UP '08), 65, Newburyport, Mass., died Oct. 4, 1947, following a short illness. Dr. Blakely had been a member of the Massachusetts Veterinary Association for many years and was admitted to the AVMA in 1940.

***John G. Coughlin** (KCVC '13), 63, Edina, Mo., died Aug. 10, 1947, of a heart attack. Dr. Coughlin had practised in Edina for thirty-five years, coming to the town upon his graduation from Kansas City Veterinary College in 1913. He had been a member of the AVMA since 1916.

***B. W. Heath** (CVC '07), 71, Montebello, Calif., died Sept. 6, 1947. Dr. Heath had practised in Whittier, Calif., for over thirty years before moving to Montebello recently. He had acted as assistant state veterinarian of Illinois and was a president of the Illinois Live Stock Board before coming to California. He was admitted to the AVMA in 1925.

***Egbert S. Hess** (MCK '06), 69, Kentland, Ind., died Sept. 9, 1947, following an illness of seven months. He had spent several years in Indianapolis as chief veterinary inspector of Indiana and had returned to Kentland on August 1. Dr. Hess was admitted to the AVMA in 1940.

***A. R. McLaughlin, Sr.** (MSC '26), 61, Kansas City, Mo., died Aug. 14, 1947. Dr. McLaughlin was born at South Canaan, Pa. He was formerly on the faculties of the Michigan State College and the University of Wyoming, following which he engaged in practice in Kansas City. He joined the AVMA in 1942. His son, Dr. A. R. McLaughlin, Jr., has assumed his practice.

***W. F. McNamara** (CVC '14), 60, Sterling Junction, Mass., died on Aug. 15, 1947. Dr. McNamara served as a lieutenant in the Veterinary Corps in World War I. He had been a member of the AVMA since 1916.

***Sheldon Scoville** (API '43), Maplewood, N. J., died Oct. 2, 1947, as a result of superficial bites by a rabies-infected dog. Dr. Scoville was employed by the Newark Dog and Cat Hospital. He was released from the Veterinary Corps after World War II with the rank of captain. He had been a member of the AVMA since 1944.

Edgar B. Shaw (MCK) '06), 75, Clinton, La., died July 30, 1947. A native of Illinois, Dr. Shaw entered the U. S. BAI in 1906 and had been stationed in Louisiana since 1912 working on foot-and-mouth disease and tick eradication. Prior to his retirement in 1941, he was assigned to hog-cholera control work in the state.

***C. W. Olson** (ONT '22), 54, New Ulm, Minn., died Sept. 12, 1947, when his automobile overturned on the highway between Hanska and New Ulm. Dr. Olson had been a member of the AVMA since 1923.

***Emil C. Rayl** (IND '16), 53, Kokomo, Ind., died Aug. 19, 1947, from coronary thrombosis. He had been a resident of Kokomo for twenty-nine years, having entered practice there following service in World War I. Dr. Rayl joined the AVMA in 1941.

A. D. Traskus (ONT '38), Pittston, Pa., died Sept. 22, 1944, at the Veterans Administration, Bronx 63 N. Y. Dr. Traskus attained the rank of first lieutenant in the Field Artillery in World War II, became separated from active duty because of physical disability on Feb. 3, 1943, and returned to his home in Pittston. This report has just been confirmed by the Department of Army, Office of the Surgeon General.

*Indicates member of the AVMA.

Proceedings, Eighty-Fourth Annual Meeting American Veterinary Medical Association Cincinnati—August 18-21, 1947

General Sessions and Section Meetings

(The Opening Session and the Sessions of the House of Representatives were published in the October Journal.)

First General Session

Tuesday Morning, August 19, 1947

The first general session convened at 8:30 a. m., President Simms presiding.

(Motion Picture—Swine Brucellosis, by L. M. Hutchings, Lafayette, Ind.)

PRESIDENT SIMMS: The meeting will now come to order, and we will proceed with the program. The first paper on the program this morning is "Attenuation of Hog Cholera Virus by Passage in Rabbits" by Dr. J. A. Baker, Princeton, N. J.

. . . Dr. Baker read his paper. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: We thank you, Dr. Baker, for this very fine contribution to the program. Following the procedure that has been set up in the past, I believe we do not have discussion from the floor on papers at the general session.

Next on the program is a presentation by Dr. C. F. Schlotthauer, Rochester, Minn., "Some Nervous Diseases of Dogs."

. . . Dr. Schlotthauer read his paper. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: We thank Dr. Schlotthauer for this very fine paper and discussion.

Next on our program we have Dr. Fred O'Flaherty of Cincinnati, on "Animal Skin Diseases and Their Influence on Leather."

. . . Dr. O'Flaherty presented the paper prepared by himself and Dr. W. T. Roddy. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: It may seem trite to continue to thank those who are on the program for their fine presentations, but I surely feel that Dr. O'Flaherty has brought us many things to give serious consideration to in the days and years ahead. I wish to express our appreciation of that fine presentation of material with which we are not as familiar as we should be.

Dr. Madden, the chairman of the Local Arrangements Committee, has some announcements. (Dr. Madden made several announcements.)

PRESIDENT SIMMS: We have received a cablegram from London, which we would like to read at this time. It is addressed to the president of the American Veterinary Medical Association and reads as follows:

Greetings and best wishes for a most successful meeting.

s/ L. Guy Anderson, President
National Veterinary Medical Association
of Great Britain and Ireland.

We shall ask our secretary to acknowledge this and to express our appreciation.

The next part of our program is a symposium on foot-and-mouth disease. The first speaker in this group is Dr. Fernando Camargo of Mexico City. Dr. Camargo, as I am sure you all know, is in charge of the research work for the veterinary division of the Government of Mexico. He has had large experiences in the past in the various diseases which occur in that country. Then the last several months he has been concerned particularly with the outbreak of foot-and-mouth disease which has occurred in Mexico.

He has had the opportunity to visit Europe to study the work that is under way in the different laboratories there, so that he comes to us with the latest information not only as to occurrences in Mexico but the latest information throughout the world.

It is a real pleasure to greet Dr. Camargo, to welcome him here, and to have him appear on our program. Dr. Camargo! (Applause.)

. . . Dr. Camargo read his paper. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: Thank you, Dr. Camargo. At the end of the formal part of this program I am sure that we will have some questions.

The next man on the published program is Dr. Shahan, but Dr. Shahan did not find it possible to leave Mexico and come to Cincinnati for this meeting. He had some rather important appointments for this week, and he felt it was inadvisable for him to leave, you might say, the field of battle. So, since Dr. Shahan is not here, we will pass to the next speaker, the Hon. George W. Gillie, our Congressman, as you know, from Indiana who represents not only his own district but, I might say, also the veterinary profession, both officially and unofficially in Washington.

I would be remiss in my own feelings if I didn't express publicly here the very fine support which all of you know Dr. Gillie has given to the American Veterinary Medical Association since he has been in Washington, the very fine work he has done for the support of the entire profession as well as this Association and, if I might also add, he is surely the warmest and the truest friend that the Bureau of Animal Industry has on the Hill.

It was a very happy circumstance that Dr. Gillie, as a member of the Congress, could make a trip to Mexico and see something of the program that was under way down there, because he represented not only the Congress itself but also the veterinary profession, in that he took with him technical knowledge and practical experience with the disease. So he was of inestimable value to the Congress in heading a committee which visited Mexico and which brought back information on which the Congress based their actions for this year.

It is a real pleasure to introduce and to call to the platform Dr. George W. Gillie. (Applause.)

DR. GEORGE W. GILLIE: Mr. Chairman, Ladies and Gentlemen of the Conference: In

the beginning I wish to pay my compliments to Dr. Camargo for the fine work that he is doing in Mexico on foot-and-mouth disease. When we were down there in July, I talked with him, and found that he is very much interested in this work, and he has done an enormous amount of work in trying to eradicate the disease in Mexico. So I take this opportunity to compliment him because I feel that he has had a lot to do with this work and also because of the fact that it is necessary to have help from the Bureau of Animal Industry in this country, which they did give him, and I am sure that they are doing a very fine job.

. . . Dr. Gillie then read his paper. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: Is Dr. Clarkson in the room? Since Dr. Shahan was not able to appear on the program, I am imposing on Dr. Clarkson to ask him to give some of the factual statements as to the present program in Mexico, the number of personnel down there, the number of animals being slaughtered, and so on. Then we will throw the meeting open for a discussion of this problem.

. . . Dr. Clarkson read his paper. . . . (Applause.) (Paper and discussion to be published.)

Second General Session

Tuesday Afternoon, August 19, 1947

The second general session convened at 1:30 p. m., President Simms presiding.

(Motion Picture—Training You to Train Your Dog.) (Announcements by Dr. Madden.)

PRESIDENT SIMMS: In resuming our program for the second general session we shall call on Dr. L. M. Roderick and his assistants for the first paper, entitled "A Study of Equine Fistulous Withers and Poll Evil."

. . . Dr. Roderick presented the paper prepared by himself, Alice Kimball, W. M. McLeod, and E. R. Frank. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: I think all of us who have dealt with these rather troublesome problems of withers and poll evil can thank Dr. Roderick and his coworkers for this fine presentation of the work which they have done on this particular problem.

Without attempting to discuss this paper, I might say that I have always been puzzled by the fact that fistulous withers in horses did not occur in some sections of the country where brucellosis in cattle is quite common. I have always wondered, if the Brucella organism was the cause of fistulous withers, just why the disease was absent in horses in these areas. I believe his discussion of the double infection surely throws some light on that phase of the problem.

The next paper on our program this afternoon is "The Blood Groups in Cattle" by Dr. L. C. Ferguson of Columbus, Ohio. (Applause.)

. . . Dr. Ferguson read his paper. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: Dr. Ferguson has surely brought to us some very fine information concerning the blood groups in cattle. I know that more than one of those who have worked in laboratories have been befuddled by the findings in regard to bovine blood. I was very much interested in this paper, as I know many other people were.

Next on our program is "Four Decades of Veterinary Progress" by Dr. J. A. Barger of Des Moines, Iowa. (Applause.)

. . . Dr. Barger read his paper. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: I wish to thank you, Dr. Barger.

The next paper is "Equine Encephalomyelitis in New Jersey Pheasants in 1945 and 1946" by Dr. F. R. Beaudette and Dr. J. J. Black, New Brunswick, N. J. (Applause.)

. . . Dr. Beaudette presented the paper* prepared by himself and Dr. Black. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: As is usual, Dr. Beaudette has brought us the very latest and authentic report of the work which he has under way. The statements which he has given us have, of course, been well received by all of us.

Next we shall hear from Col. James A. McCallam, Washington, D. C., on "Developments Affecting the Army Veterinary Service." Dr. McCallam! (Applause.)

. . . Colonel McCallam read his paper. . . . (Applause.) (To be published.)

PRESIDENT SIMMS: Dr. McCallam has surely given us the Army picture, as we needed to know it. I think all of us not actively associated with the armed forces did not have this picture in full, but now if we don't have it, it is our fault, because he has really given us a word picture that was very graphic. We appreciate his coming to us with this message.

In closing this session, I want to thank the audience for the very fine spirit in which they have maintained quietness that is unusual in meetings of this type. I think I can say I have never seen a group that gave the speakers on the platform continued and respectful attention to as great an extent as this group has. I thank you for that.

The meeting stands adjourned.

(The meeting adjourned at 4:30 p.m.)

Third General Session

Wednesday Morning, August 20, 1947

The third general session convened at 11:20 a. m., Dr. Ronald Gwatkin, Ottawa, Ont., First Vice-President, presiding.

DR. MADDEN: Incomplete registration figures as of eleven o'clock this morning show the Eighty-fourth Annual Meeting has broken the all-time high. The registration is now 2,126, which is 144 above the previous high of 1,982 at Washington, D. C., in 1940.

CHAIRMAN GWATKIN: I am sorry our general meeting is late in starting, but there are various reasons which have brought it about. So we will get along without any further delay.

The first paper is by Dr. Jacob Jansen of the University of Utrecht, The Netherlands. Dr. Jansen, I believe, was invited here by the AVMA to give a talk to us on paratuberculosis. May I say how very happy we are to have him. I was over in your country in 1928, and Dr. de Blieck and some of the boys certainly looked after me well.

I am very happy, on behalf of the Association, Dr. Jansen, to welcome you here and to ask you to come up and give your paper. (Applause.)

. . . Dr. Jansen read his paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Ladies and Gentlemen: I am sure we have been extremely interested in this presentation by Dr. Jansen on Johne's disease. Are there any questions? There being no questions, we will go to the next paper, which is by Dr. E. E. Slatter, Danville, Ill., on "Employer — Employee Relationships." Dr. Slatter! (Applause.)

. . . Dr. Slatter read his paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Thank you, Dr. Slatter, for an interesting talk. I understand from what Dr. Slatter has said there will be discussion of this in later sections, but if there is any question or discussion now, it will be in order.

(Discussion to be published with paper.)

CHAIRMAN GWATKIN: We now come to the last paper of this session, "The Proposed National Board of Veterinary Examiners" by Dr. W. R. Krill of Columbus, Ohio. Dr. Krill! (Applause.)

DR. W. R. KRILL: Mr. Chairman, Members of the AVMA: I promise you that by next year we are going to bring this National Board of Veterinary Examiners to a conclusion. It has been hanging fire for a long time and, of course, like a lot of good things that we think are good, it can wait. We don't want to rush into it. I think it is well that everybody know quite well of what a National Board of Veterinary Examiners consists and what it is proposed to do, so that there will be no misunderstanding.

It has been discussed off and on for a number of years in the House of Representatives, and we thought that this year it might be well to bring it out into the open, so that we would have the constituents of our Association well informed as to what is being attempted.

I am going to read this, and I will read it rather hurriedly because we can say some things at times extemporaneously that might be misunderstood. For that reason, I want to make sure that what I say will not be misconstrued or that anyone will get the wrong conception of what is being done.

. . . Dr. Krill read his paper. . . . (Applause.) (To be published.)

DR. KRILL: I might say we are planning to get together this fall and complete this work. We want it published in the JOURNAL. We want you to think about it. I do hope that in this discussion we have cleared up some of the points that may have been bothering some individuals, and that is particularly in regard to interfering with states' rights and control of these practitioners, keeping them from becoming "tramp" veterinarians. I do not believe we are going to have much of that trouble with which to contend.

We also have to remember, before the results of a National Board of Examiners can be accepted by the various states, it may become necessary for them to change their practice acts. I think the greatest benefit that will come from it will be to stimulate and to improve the examinations as they are now given and to stimulate our faculties and our students to put forth a little better effort. In so doing, we are going to raise the standards of our veterinary profession.

I thank you. (Applause.)

CHAIRMAN GWATKIN: Thank you, Dr. Krill, for an interesting presentation.

Are there any questions on this? If not, it will be left with you to think over, as was suggested by the speaker. No further business. This session is adjourned.

(The meeting adjourned at 12:25 p. m.)

Fourth General Session

Thursday Morning, August 21, 1947

The fourth general session convened at 11:40 a.m., President Simms presiding.

PRESIDENT SIMMS: Ladies and Gentlemen: For the last paper to be presented before the general session, we are extremely fortunate in having Dr. J. W. Buchta of Minneapolis discuss for us "Radioactive Isotopes in Veterinary Medicine." Dr. Buchta! (Applause.)

... Dr. Buchta presented his paper. ... (To be published.)

PRESIDENT SIMMS: We surely want to express our appreciation to Dr. Buchta for bringing us this very fine paper and very interesting and novel demonstration of some of his techniques. While this is far beyond the realm of the work that most of us do, we can at least see some of the possibilities. I do not doubt but what some of our people connected with research institutions, experiment stations, are already beginning to turn over in their minds some of the practical applications that might be made from the use of these isotopes.

This concludes the formal paper presentations.

(The installation of officers followed, the proceedings of which were published in the October JOURNAL, pp 253-254.)

Section on General Practice

Wednesday Afternoon, August 20, 1947

The first session of the Section on General Practice, held in connection with the Eighty-fourth Annual Session of the American Veterinary Medical Association, at the Netherland Plaza Hotel, Cincinnati, Ohio, convened at 1:30 p. m., Dr. J. C. Carey, West Liberty, Iowa, Chairman of the Section, presiding.

[Motion Picture — Foot-and-Mouth Disease (U. S. Bureau of Animal Industry).]

CHAIRMAN CAREY: Fellow Members of the American Veterinary Medical Association: I now declare the General Practice Section of the AVMA to be in session.

In reviewing the programs of the Association, we realize that general practice has changed much during recent years. The draft horse is almost out of the picture since the advent of mechanized farming in the Cornbelt and in the Middlewest, although it is still used in the South. Light horse practice is important in some sections, and perhaps we should have had a paper on some phase of horse practice in this section of the AVMA program.

The high price of meat and milk-producing animals has increased the demand for veterinary services in all livestock producing areas. As Dr. Simms mentioned in his opening address, there is a scarcity of meat, and, due to the steady increase in our population, the supply will not exceed the demand for some time to come.

I talked with a Canadian veterinarian who is attending this meeting, and he informed me that it is next to impossible to obtain good bacon in Canada. It is our responsibility to help increase the home meat supply on which depends the health and prosperity of our people, and on which depends the conservation of our soil for future generations.

We must ever be on the alert for infectious or contagious diseases, and the one that is paramount is foot-and-mouth disease.

We will now have the secretary's report by Dr. Dykstra.

SECRETARY DYKSTRA: Dr. Carey, Friends: Frankly, the secretary doesn't have any report. Dr. Carey and I merely worked together in trying to formulate this program that we hoped would be of interest to you, from the various suggestions that have been made to us.

CHAIRMAN CAREY: We are very disappointed that Dr. Carlos Rosenbusch has sent us word that he cannot be with us at this time. He has sent his paper to Dr. Merchant, with whom he is well acquainted. I will ask Dr.

Merchant to read the title of the paper at this time and offer a word of explanation.

DR. IVAL A. MERCHANT: Just before I left for this convention, I had a letter from Dr. Rosenbusch stating that it was impossible for him to be here, but that he was sending the paper by air mail in the event the Association wished it read. It would be much better to merely read the title, I believe. The complete title of the paper is this: "New Foot-and-Mouth Disease Vaccine—the Intradermic Vaccine Results Obtained from the First Million Head of Cattle Vaccinated," by Carlos T. Rosenbusch, Andrés Decamps, and Nicolas Gelormini.

Dr. Rosenbusch, as you may not know, was a student at Iowa State College. He graduated in 1936 with a D.V.M. degree and continued for graduate work, obtaining the M.S. and Ph.D. degree. He then went back to his home in Buenos Aires where he is at the present time director of an institute that was established by his father. Since he has been back these eight or nine years he has been very active in the investigation of foot-and-mouth disease and brucellosis, particularly. He is disappointed over being unable to attend because he had planned on it so very much for about a year. Thank you very much. (Applause.)

DR. L. M. HURT [Los Angeles, Calif.]: Inasmuch as foot-and-mouth disease is rather important at present, I move that Dr. Merchant be authorized to read the paper. More than one present came to hear the paper.

(The motion was seconded by Dr. Smith, Indiana.)

CHAIRMAN CAREY: It has been moved and seconded that this paper be read. Is there any discussion? All in favor of the reading of the paper signify by saying "aye"; opposed "no." Carried.

. . . Dr. Merchant read the paper prepared by Dr. Rosenbusch . . . (Applause.) (To be published.)

CHAIRMAN CAREY: Thanks, Dr. Merchant, for that very able presentation of an excellent paper by Dr. Rosenbusch.

The next paper on our program is "Wing Amputation in Birds in Lieu of Pinioning" by Dr. W. A. Young of Chicago, Ill.

. . . Dr. Young read his paper . . . (Applause.) (To be published.)

CHAIRMAN CAREY: Thanks, Dr. Young, for that very fine description of wing amputation in birds. It is the uncommon things in practice that we practitioners should learn to do, and do well.

CHAIRMAN CAREY: The next paper on our program is "Baby Pig Disease" by Dr. George A. Young, Austin, Minn.

. . . Dr. Young read his paper . . . (Applause.) (To be published.)

CHAIRMAN CAREY: Thank you for your paper, Dr Young.

Baby pig disease is one of vital importance to the veterinarian. I know in Iowa the losses among baby pigs are enormous.. Is there any discussion, or do you wish to ask any questions?

(The discussion to be published with the paper.)

CHAIRMAN CAREY: Is there any further discussion of this paper? If not, we will proceed. Ethics is a big subject to describe or define. Perhaps we will have a definition given this afternoon in the panel discussion on "Ethics and Business Methods." I will ask the members of this panel, of which Dr. J. T. Schwab of Oconomowoc, Wis., is moderator, to come forward. Dr. Schwab will you take charge of this panel and introduce the members?

MODERATOR SCHWAB: Mr. Chairman, Mr. Secretary, Members of the AVMA, Ladies and Gentlemen: I am pleased that Dr. Carey said ethics are a hard thing to explain. Maybe ethics are something that you feel and know, without trying to explain.

Dr. Carey also mentioned the fact that I would introduce myself and the panel. He wouldn't do it because he couldn't pronounce the name of the town. I was, until recently, from Oconomowoc, which doesn't seem too difficult to pronounce for one who has lived there thirty years, but because it was difficult for many people to pronounce, I moved to Madison. (Laughter.)

We will introduce the members of the panel. The first gentleman here is Dr. Krueger from Evansville, Wis. The next gentleman is Dr. Gibson from London, Ohio, your own state here, and then Dr. Davis from Columbus, Ga. I am Dr. Schwab.

. . . The panel discussion was presented. . . (Applause.) (To be published.)

(The meeting adjourned at 4:50 p.m.)

Section on General Practice

Thursday Afternoon, August 21, 1947

The second session convened at 2:30 p.m., Chairman Carey presiding.

CHAIRMAN CAREY: We will now have the motion picture, "New Methods of Administering Drugs to Sheep." Dr. J. H. Whitlock of Ithaca, N. Y., the author and producer of this film, is with us. If there are any questions in regard to this film, he will answer them as we go along. I will ask Dr. Whitlock to make a few comments in regard to this film, if he so chooses, at this time.

DR. J. H. WHITLOCK: One of the essential troubles with developing veterinary interest in ovine practice has been the fact that a very small portion of ovine practice is beneficial from the financial or even the professional standpoint to the practitioner because of the small unit value of the sheep. Of course, formerly hogs had a smaller unit monetary value.

We did not develop any great interest in hog practice until vaccination for hog cholera became a universal custom. In order to competently vaccinate against hog cholera, it was necessary to understand thoroughly all the diseases to which swine are subject.

With this thought in mind, we tried to develop methods of administering anthelmintics to sheep (something every sheep farmer should do routinely, unless he is in the high mountain regions of the west) so that the practitioner can do a better job more quickly, more efficiently, more safely.

You will note throughout the film that references are made to the speed with which these processes can be carried out, chiefly to emphasize the fact that it is possible, without trying to set any speed records, to handle the sheep on a low per capita cost to the farmer and yet to do a much better job than the average farmer can do. With that preliminary statement, we can start the film.

(Motion Picture—New methods of Administering Drugs to Sheep.) (Applause.)

CHAIRMAN CAREY: We are indeed fortunate in having Dr. Whitlock to explain this film. It certainly helped out a great deal. Thanks, Dr. Whitlock.

We will proceed with the program. The first thing is nomination of sectional officers. A chairman comes first. We would like to have nominations from the floor for chairman of this section for the ensuing year. The meeting next year will be held at San Francisco.

DR. RICHARD M. SEARS [Cazenovia, N. Y.]: I nominate Dr. John Britton of Willits, Calif.

CHAIRMAN CAREY: Are there any other nominations for chairman? If not, we will proceed to nominations for secretary for the ensuing year.

DR. JOSEPH H. WINSLOW [La Moure, N. D.]: I nominate Dr. G. M. Wagaman of Kokomo, Ind.

CHAIRMAN CAREY: Are there any other nominations for secretary? If not, we will close the nominations and turn them over to the incoming president of the AVMA.

The first item on our program this afternoon is "Swine Practice" by Dr. J. C. Kaiser of Rockwell, Iowa. (Applause.)

. . . Dr. Kaiser read his paper. . . . (Applause.) (To be published.)

CHAIRMAN CAREY: This paper of Dr. Kaiser's certainly merits discussion, as no doubt all the following papers this afternoon will. We have three more papers on the program. We will go ahead with those and if, at the end of the program, we have time, we will discuss each of these papers. So, if you have any questions, just jot them down and we will discuss them at the end of the program.

The next is "The Differential Diagnosis of Mastitis Cases in the Field" by Dr. W. D. Pounden of Wooster, Ohio.

. . . Dr. Pounden read his paper. . . . (Applause.) (To be published.)

CHAIRMAN CAREY: "Treatment of Pneumonia in Cattle" by S. J. Roberts and George K. Kiesel, Ithaca, N. Y. I believe Dr. Roberts is here to present this paper.

... Dr. Roberts read the paper prepared by himself and Dr. Kiesel. ... (Applause.) (To be published.)

CHAIRMAN CAREY: "Control of Brucellosis in Practice" by John F. Rankin, Astoria, Ore. Is Dr. Rankin present? If he isn't here to present this paper, we have some time left for discussion of the papers that have been presented this afternoon.

(Discussion followed, which will be published with the various papers.)

CHAIRMAN CAREY: I have considered it an honor and a privilege, and I also speak for Dr. Dykstra who was secretary for this Section, and myself as chairman, to act in this capacity.

If there are no further discussions, I declare this session closed. We are adjourned.

(The meeting adjourned at 5 p.m.)

Section on Small Animals

Wednesday Morning, August 20, 1947

The first session of the Section on Small Animals, held in connection with the Eighty-fourth Annual Session of the American Veterinary Medical Association, at the Netherland Plaza Hotel, Cincinnati, Ohio, convened at 9:00 a. m., Dr. H. S. MacDonald, Toronto, Ont., chairman of the section, presiding.

CHAIRMAN MacDONALD: Ladies and gentlemen, the first part of our program is a lecture by Dr. Goss. We are very glad to welcome you all to the opening session of the Small Animal Section.

The program has been prepared by Dr. Weadon to whom all credit is due. He has spent a lot of time on it, and our thanks should go to him for the excellence of the program prepared.

I want also to thank the local committee on the excellent arrangements they have made to carry on this meeting. Our time is short. We were supposed to start at 8:30 and it is now nine. We will call on Dr. Goss to address us on "Distemper Inclusion Bodies."

. . . Dr. Goss read the paper prepared by himself, Drs. Clarence R. Cole, and H. Engel. . . . (Applause.) (To be published.)

CHAIRMAN MacDONALD: Thank you, Dr. Goss.

We will next have "Intratracheal Anesthesia" by Dr. John D. Gadd, Towson, Md.

. . . Dr. Gadd read his paper. . . . (Applause.) (To be published.)

CHAIRMAN MacDONALD: Are there any questions to ask Dr. Gadd? If not, we will ask Dr. E. J. Frick of Manhattan to give us "Examination of a Dog's Digestive Tract."

. . . Dr. Frick read his paper. . . . (Applause.) (To be published.)

CHAIRMAN MacDONALD: Thank you, Dr. Frick.

We will now have Dr. M. L. Morris, New Brunswick, N. J., on "Clinical Interpretation of Some Recent Developments in Nutritional Research." (Applause.)

. . . Dr. Morris read his paper. . . . (Applause.) (To be published.)

CHAIRMAN MacDONALD: We now will have a panel discussion on "Distemperoid Virus (Greene) in Practice." Dr. Edgett is the moderator. I will ask Dr. Edgett to proceed with this panel.

. . . Moderator Edgett read his paper. . . . (Applause.) (To be published.)

MODERATOR EDGETT: For statistics on this subject, I think we will call first on Dr. Groth of San Mateo, Calif.

DR. H. H. GROTH: I am afraid that I won't be able to add much to that splendid presentation. In fact, it looks like my paper is a repetition of some of the things that have been stated already.

. . . Dr. Groth read his paper. . . . (Applause.) (To be published.)

MODERATOR EDGETT: Thank you very much, Dr. Groth.

Now, Dr. John LaFrance of Binghamton, N. Y., may we hear from you?

. . . Dr. LaFrance read his paper. . . . (Applause.) (To be published.)

MODERATOR EDGETT: Thank you, Dr. LaFrance.

Dr. Schroeder, unfortunately due to illness, cannot be present. He asked that his paper be read, which our secretary, Dr. Mason Weadon, has consented to do.

. . . Secretary Weadon read the paper prepared by Dr. E. F. Schroeder, Boston, Mass. . . . (Applause.) (To be published.)

MODERATOR EDGETT: Thank you, Dr. Weadon.

I know that Dr. Zepp is going to touch on the use of distemperoid, therapeutically. Dr. C. P. Zepp! (Applause.)

. . . Dr. Zepp read his paper. . . . (Applause.) (To be published.)

MODERATOR EDGETT: Thank you very much, Dr. Zepp. I have wanted very much to have a little time for questions, but perhaps it is wise not to, do so as we were to have vacated this room five or ten minutes ago. If there are any questions, you might submit them in writing to Dr. Weadon or Dr. MacDonald, and we will perhaps try to answer them tomorrow.

Thank you very much.

. . . The meeting adjourned at 11:15 a. m. . . .

Section on Small Animals

Thursday Morning, August 21, 1947

The second session convened at 9:10 a. m., Chairman MacDonald presiding.

DR. MacDONALD: Good morning, Ladies and

Gentlemen. We have a motion picture this morning. Are we ready for the film?

[Motion Picture—Gelatin Sponge for Control of Hemorrhage (The Upjohn Company).]

DR. MacDONALD: We will now have the report of our secretary, Dr. Weadon, from Washington, D. C. Will you give that now, Dr. Weadon, please?

DR. WEADON: Mr. Chairman, and Members of the Small Animal Section: I have no specific report, but I want to take this opportunity to thank, publicly, the men who have traveled far, worked hard and well, given their time and efforts to coöperate with me to present this program to you. Thank you. (Applause.)

DR. MacDONALD: To get on, we have the nomination of section officers. That would be for 1948, in San Francisco. The floor is open for nominations.

DR. SNYDER: Are there any requirements for nominations?

DR. MacDONALD: Article 14, Section 2, of the By-Laws reads: The officers of each section consist of a chairman and a secretary. The officers of the section shall be chosen from the section members, nominated by ballot by each section, or, in lieu of such nomination, by direct appointment.

DR. CARLAN: Mr. Chairman, I nominate Dr. Eugene Jones of Hollywood, Calif., for the chairman of this section next year.

DR. STEVENSON: I second the nomination.

DR. WRIGHT: I move the nominations be closed.

DR. THEOBALD: Second the motion.

DR. MacDONALD: Will you nominate a secretary now?

DR. MORELAND: I place in nomination for secretary Dr. Harold H. Groth of San Mateo, Calif.

DR. THEOBALD: I move the nominations be closed.

DR. CRAMER: Second the motion.

DR. MacDONALD: It has been moved and seconded that the nominations be closed. Thank you. We now have a change in the program. Instead of "Diseases of the Thorax and Abdomen in the Dog," by Dr. Wm. J. Lentz and Dr. J. H. Mark, of Philadelphia, the title has been changed to "Differential Diagnosis and Treatment of Some Conditions Involving Heart and Lungs of Dogs," by Dr. Mark.

. . . Dr. Mark read his paper. . . . (Applause.) (To be published.)

DR. MacDONALD: Now we have a paper on "Canine Leptospirosis" by Col. Raymond Randall, Washington, D. C.

. . . Colonel Randall read his paper. . . . (Applause.) (To be published.)

DR. MacDONALD: We now have "Traumatic Injuries in Small Animals," by Dr. E. A. Ehmer, from Seattle, Wash.

. . . Dr. Ehmer read his paper. . . . (Applause.) (To be published.)

DR. MacDONALD: We will now have the panel discussion. Dr. Snyder is the moderator.

DR. SNYDER: Will the members of the panel please come forward?

Mr. Chairman, and Fellow Colleagues: According to the time, we have seven minutes for this discussion. I don't know what the requirements are going to be, or how much pressure is going to be brought to bear for us to stop this panel, but it seems unfair to ask four or five men to prepare papers, spend their time, and come from a distance, and then not hear them through, so we're going ahead until somebody comes up and throws us off.

We have, reading from left to right, Dr. A. R. Theobald, who has a paper on "Ambulance Service;" Dr. Gerry B. Schnelle, with a paper on "Ethics of Referred Practice;" Dr. Charles Rife, with a paper on "Day Costs of Operating a Hospital in Relation to Fees Charged;" and Dr. Raymond Currey, with a paper on "Accounting Systems in Veterinary Hospitals."

And with your indulgence, I would like to give a short paper on "Telephone Directory Advertising."

. . . Dr. Snyder read his paper. . . . (Applause.) (To be published.)

DR. SNYDER: We will reserve all questions until the end of the papers. We had hoped that we might be able to discuss this with you, but at this time I'm going to call on Dr. Theobald for his paper.

. . . Dr. Theobald read his paper. . . . (Applause.) (To be published.)

DR. SNYDER: Well, we come to that point where we are warned off the stage, and as moderator for this particular subject, I perhaps have to hold the bag and do the arguing. I personally feel, that in fairness to these other three doctors, that there is no reason why we should ignore them completely. Mr. Chairman, this is a rather embarrassing position to be in. Have you a solution to it?

DR. MacDONALD: Dr. Snyder, we were late in getting started, not through any fault of our own, and I think that the General Session that follows would be generous enough to allow us to continue. I'll take the responsibility.

DR. SNYDER: Dr. Schnelle, I would like to ask you to give your paper and I apologize to the members of my panel right here, for this particular unfortunate occurrence. Dr. Schnelle will now give his paper on "The Ethics of Referred Practice."

. . . Dr. Schnelle read his paper. . . . (Applause.) (To be published.)

DR. SNYDER: We will now hear from Dr. Currey on "Accounting Systems in Veterinary Hospitals."

. . . Dr. Currey read his paper. . . . (Applause.) (To be published.)

DR. SNYDER: It is with reluctance that we turn back the discussion to the chairman.

DR. MacDONALD: We have gone a great deal over our time. I feel that there is one member of this panel, Dr. Rife, who should give his paper. On the other hand, we have been instructed to close. If he will accept my personal apologies for poor arranging, I would appreciate it. It's asking a great deal.

DR. RIFE: I'm happy to do so.

DR. MacDONALD: Thank you, Dr. Rife.

DR. SNYDER: Due to the closing of the panel, there will be no further discussion, and we are disappointed. I apologize to the members of the panel again. I feel that there has been a definite shortage in making up this program. After a man has prepared a paper, he should be heard, and I apologize, as a member of the A.V.M.A., Dr. Rife, and as a member of my panel. (Applause.)

DR. MacDONALD: I would like to thank all of those that participated in this program. The meeting is adjourned.

(The meeting was adjourned at 11:30 a. m.)

Section on Surgery and Obstetrics

Wednesday Morning, August 20, 1947

The first session of the Section on Surgery and Obstetrics, held in connection with the Eighty-fourth Annual Session of the American Veterinary Medical Association, at the Netherland Plaza Hotel, Cincinnati, Ohio, convened at 8:40 a. m., Dr. M. A. Emmerson, Ames, Iowa, chairman of the section, presiding.

[Motion Picture—Bovine Surgery, from the AVMA Film Library.]

CHAIRMAN EMMERSON: Gentlemen, I think now is the time to officially open the Section on Surgery and Obstetrics of the Eighty-fourth Annual Convention of the American Veterinary Medical Association.

According to the program, the chairman is supposed to make a few remarks. We haven't time for lengthy remarks, but tomorrow morning, nominations will be made for chairman and secretary of the Section on Surgery and Obstetrics for the San Francisco meeting. I hope you will think about that between now and tomorrow morning so that the recommendations for chairman and secretary of this Section next year won't take too long.

Dr. Simms has requested that the following announcement be made. It has been agreed by the Exhibitors' Association and the AVMA that all commercial exhibits will close at 3 o'clock, Thursday, August 21.

I will take a moment to call your attention to the fine program we have this morning and tomorrow morning and to personally thank Dr. Bryan for the tremendous amount of work he did in collecting this group of fine papers.

Next on the agenda today will be the report of the secretary

DR. BRYAN: Dr. Emmerson, Ladies and Gentlemen: Your officers deeply appreciated the nominations last year and we are, this year, fully aware of the work that is involved when you are an officer of a section.

We are happy to see so many of you here this morning. It is your presence and the fine coöperation we get in making up the program that makes the work of the section officers much easier.

At this time I would like to express, with Dr. Emmerson, our appreciation for the attendance and for the speakers and their efforts and time for our program of the section. I thank you.

CHAIRMAN EMMERSON: We must be through in time for the General Session. I am going to ask that if there is any discussion on any of the papers, you will arise, give your name, and please speak up so that the recording secretary can hear you.

The first paper on our program this morning is entitled "Why Our Hormone Treatments Sometimes Fail." It will be presented by Dr. C. F. Cairy of East Lansing, Mich. Dr. Cairy!

. . . Dr. Cairy read his prepared paper. . . . (Applause.) (Paper and discussion to be published.)

CHAIRMAN EMMERSON: Thank you very much, Dr. Cairy, for this fine paper, and I thank the audience very kindly for that fine bit of discussion.

The next paper on the schedule, and by the way, we are running right on schedule, is entitled, "A Study of the Placenta of the Cow," and the author is Dr. H. E. Kingman of Cheyenne, Wyo.

. . . Dr. Kingman read his prepared paper which was illustrated with colored slides. . . . (Applause.) (Paper and discussion to be published.)

CHAIRMAN EMMERSON: Thank you, Dr. Kingman. I think many of us realize the tremendous amount of work that has gone into your presentation.

The next paper on our program this morning is entitled, "Clinical Diagnosis and Treatment of Breeding Unsoundness in Cows," to be presented by Dr. J. W. Cunkelman, of East Lansing, Mich.

. . . Dr. Cunkelman read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN EMMERSON: Because our time is running short and also because the next paper will fit in very well with the discussion of Dr Cunkelman's paper, I am going to take the liberty of asking Dr. G. R. Moore of Manhattan, Kan., to present his paper on "The Causes and Diagnosis of Infertility in Bulls" at this time. Dr. Moore!

. . . Dr. Moore read his prepared paper. . . . (Applause.) (To be published.)

[Chairman Emmerson made a few announcements.]

CHAIRMAN EMMERSON: Now, we are running a little behind time this morning and the general session is about ready to start. What is your pleasure regarding discussion of these papers? Do you want to stay and discuss them or would you prefer to adjourn until tomorrow morning?

. . . Upon motion duly made and seconded, it was voted to recess the meeting. . . .

. . . The meeting recessed at 11:10 o'clock. . . .

Section on Surgery and Obstetrics

Thursday Morning, August 21, 1947

The second session convened at 9:00 a. m. with Chairman Emmerson presiding.

CHAIRMAN EMMERSON: I would like to call the second session of the Section on Surgery and Obstetrics to order. There is a slight change in the program this morning because of the great demand for equipment. Instead of the motion picture, I would like to present Dr. John D. Gadd of Towson, Md., who will present his paper on "Forssell's Opertation for Correction of Cribbing." We will have the movie later when the proper projector is available. Dr. Gadd!

DR. JOHN D. GADD: Gentlemen, I have no prepared paper. This is a description of the operations originated and developed by Dr. Forssell of Sweden and is very well written up in the proceedings of the International Veterinary Congress of 1934, in great detail. (To be published.)

A motion picture was shown in connection with the paper.

[The motion picture, "Swine Surgery," was shown.]

CHAIRMAN EMMERSON: At this time, I would like to take a few moments and call for nominations for chairman and secretary of the Section on Obstetrics and Surgery for the next year's meeting. Are there any nominations for the chairman of the Section on Surgery and Obstetrics?

DR. A. GORDON DANKS (N. Y.): I would like to nominate Dr. Harry Johnson of Colorado for the chairman of the Section on Surgery and Obstetrics next year.

CHAIRMAN EMMERSON: Are there any other nominations? If there are no other nominations, we will ask for nominations for the secretary of the Section on Surgery and Obstetrics.

MEMBER: I nominate Dr. John Gadd.

DR. GADD: I decline that. I just can't take it.

CHAIRMAN EMMERSON: Are there any other nominations?

DR. GADD: I nominate Dr. Danks of Cornell.

CHAIRMAN EMMERSON: You know, you can nominate as many as you wish. The nominations are turned over to the incoming president and used by him in appointing the chairman and secretary for the various sections.

If there are no other nominations, then Dr. Johnson has been recommended for chairman by this group and Dr. Danks for secretary of

the Section on Surgery and Obstetrics, and those will be forwarded to the incoming president.

With your permission, I would like to alter the program a little bit because of the conflict between the various sections and the use of the projection apparatus. I haven't had an opportunity to consult Dr. Millenbruck about this, but I will have to take a chance on it. Dr. Allam has a few lantern slides and in order to get the projector to another section, I will ask him if he will present his paper, "Some Clinical Observations in the Prevention and Treatment of Shock by Intravenous Gelatin," and then immediately following Dr. Allam, we will have Dr. Millenbruck's paper and in that way, we will get the use of this machine. Dr. Allam!

. . . Dr. Mark Allam of Philadelphia, Pa, read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN EMMERSON: This paper is open for discussion. (Discussion to be published with paper.)

CHAIRMAN EMMERSON: Are there any other questions? We will proceed with the next paper, "A Newly Developed Anesthetic for Large Animals," by Dr. E. W. Millenbruck of Carthage, Mo. Dr. Millenbruck!

. . . Dr. Millenbruck read his prepared paper, illustrated with a color movie. . . . (Applause.) (To be published.)

CHAIRMAN EMMERSON: We will open Dr. Millenbruck's paper for discussion. I would like to have all the questions so he can summarize them as quickly as possible. We are running behind time. We still have one more paper. Are there any questions? (Discussion to be published with paper.)

CHAIRMAN EMMERSON: We are running behind time. Almost everyone who presents a paper can in the few words necessary give us the essence of his paper. I know Dr. Hutchings' paper will be printed and I am going to ask him to shorten his paper and give us the meat of it in as short a time as possible. I think it will be well worth-while.

. . . Dr. Hutchings gave a résumé of his paper entitled, "Sterility in Swine.". . . (Applause.) (To be published.)

CHAIRMAN EMMERSON: I am very sorry that we were rushed this morning and I am afraid we won't have time for discussion. There is an announcement to be made. A rumor which has no basis whatever is circulating to the effect that the 1948 AVMA meeting in San Francisco has been cancelled. The Association has received no information concerning such a possibility.

The other announcement I wish to make is that we have a speaker in the General Session this morning from outside the profession talking on the latest isotopes. That is, a radioactive isotope in veteriary medicine. President Simms is very anxious to have our crowd in attendance and I am sure no one wants to miss knowing the very latest concerning radioactive substances and we will all be glad to hear about this.

I therefore pronounce the Section on Surgery and Obstetrics closed for 1947.

. . . The meeting adjourned at 11:30 o'clock. . . .

Section on Poultry

Wednesday Morning, August 20, 1947

The first session of the Section on Poultry, held in connection with the Eighty-fourth Annual Session of the American Veterinary Medical Association, at the Netherland Plaza Hotel, Cincinnati, Ohio, convened at 9:00 a. m., Dr. B. S. Pomeroy, St. Paul, Minn., chairman of the section, presiding.

[Motion Picture—Newcastle Disease. C. R. Cole, Columbus, Ohio.]

CHAIRMAN POMEROY: I would like to express my appreciation to the secretary of this group for doing all the hard work of getting this program arranged and coördinated, and it is only when one has served in the capacity of secretary that one can appreciate the job that it is.

Whoever is elected secretary tomorrow will have to start thinking at that time about his program, rather than a few weeks or a few months before the next AVMA. To Dr. Delaplane who has arranged this program, I express my compliments.

The first paper is entitled "Modified Newcastle Virus Vaccines." It will be presented by Dr. Brueckner of the University of Maryland, College Park, Md. Dr. Brueckner!

. . . Dr. Brueckner read the paper prepared by himself and Reginald L. Reagan, Mary G. Lillie, and Leo J. Poelma, College Park, Md. . . . (To be published.)

DR. BRUECKNER: We haven't been able to do anything to arrive at the point at which the immunity develops or begins to develop to a point where it would be worthwhile. We haven't had an opportunity to work on the length of the immunity, except at one month. We have in the field injected, at this time, quite a few birds in some of the broiler plants. We have some pullet flocks injected which we wish to follow, of course, through next fall and winter and do some work on the eggs and the chicks produced from those.

That is all I have, Dr. Pomeroy. (Applause.)

CHAIRMAN POMEROY: Thank you, Dr. Brueckner. In order to keep our program moving, we will discuss the three papers before the symposium. We are attempting to have this completed in entirety at 11 o'clock sharp, and we are going to hold the individuals to the time allotted.

Dr. Osteen will present his paper at this time on "Newcastle Disease." The paper is by Drs. Osteen and Anderson of the Pathological Division, Bureau of Animal Industry. Dr. Osteen!

. . . Dr. O. L. Osten read the paper prepared by himself and Dr. W. A. Anderson. . . . (Applause.) (To be published.)

CHAIRMAN POMEROY: Thank you, Dr. Osteen. The next paper is "The Effect of Certain Chemical Agents on the Virus of Newcastle Disease of Chickens," by Dr. C. H. Cunningham, East Lansing, Mich., School of Veterinary Medicine, Michigan State College.

. . . Dr. Cunningham read his paper. . . . (Applause.) (To be published.)

CHAIRMAN POMEROY: Thank you, Charlie. Now, while the members of the panel are congregating, we have ten minutes for a discussion period. Are there any questions you would like to ask the authors of the three papers? (Discussions to be published with papers.)

Are there any other questions that you would like to ask? If there are no other questions, we will now call for the symposium on Newcastle disease. Dr. F. R. Beaudette is going to act as moderator of this group, so I shall turn the next hour over to Dr. Beaudette and his panel.

DR. BEAUDETTE: At a meeting in Baltimore, November 18, last year, as already related, under the sponsorship of the Bureau of Animal Industry, the poultry pathologists gathered from various parts of the United States to consider this question of Newcastle disease, and five committees were appointed there. This group which you see around the table constitutes the chairmen.

In dealing with this symposium on Newcastle

disease, I shall call on the various committee chairmen to report what they have done, and then after we have finished we will ask for any remarks from the floor.

These committees include Dr. T. C. Byerly's, whose job was to collect information on the incidence of the disease in the country, mortality, and various other points; my own committee had to do with the diagnosis of the disease; Dr. H. E. Moses' committee was concerned with the properties of the virus; Dr. E. Jungherr's committee with the spread of the disease; and Dr. C. A. Brandly's committee was concerned with immunization.

Normally, we would call on Dr. Byerly first because his was committee No. 1, so to speak, but in view of the fact that Dr. Jungherr has to catch a train, we will call on him at this time.

. . . Dr. Jungherr read his paper. . . . (To be published.)

DR. BEAUDETTE: Thank you, Dr. Jungherr. Next we will have a report from Dr. T. C. Byerly, of Washington. I don't know what the title of his report will be.

. . . Dr. Byerly read his paper. . . . (To be published.)

DR. BEAUDETTE: Thank you, Dr. Byerly. Next we will call on Dr. H. E. Moses of Lafayette, Ind., to report on the properties of the virus. Dr. Moses!

. . . Dr. Moses read his paper. . . . (To be published.)

DR. BEAUDETTE: Thank you, Dr. Moses. We will call on Dr. Brandly now for the report of his committee on immunization. Dr. Brandly!

. . . Dr. Brandly read his paper. . . . (To be published.)

DR. BEAUDETTE: Thank you, Dr. Brandly.

. . . Dr. Beaudette read his own paper. . . . (To be published.)

Are there any remarks from the floor?

DR. EDWIN P. JOHNSON (Blacksburg, Va.): Mr. Chairman, has any work been done on sterilization of used feed bags? We have had that come up. Two or three concerns have asked us about sterilizing by using formaldehyde gas. What do you recommend? From the reports, formaldehyde doesn't seem to be very good and, of course, using liquids is almost impossible because of the deterioration. I wonder if some work of that nature should be undertaken, working with these concerns.

DR. BEAUDETTE: Dr. Jungherr is the only one I know of who has done any work along that line.

DR. JOHNSON: I wondered about the use of some gas as fumigant.

DR. BEAUDETTE: I don't know of anything being done along that line. That would come under the province of Dr. Jungherr's committee. Any more remarks from the floor?

DR. HENDERSHOTT: I would like to know if the federal government has an ample supply of those copies of poultry farm sanitation programs and what the reaction has been to that program in the field.

DR. BEAUDETTE: I think I would have to ask Dr. Osteen about the supply. I presume it is adequate, Dr. Osteen?

DR. O. S. OSTEEN (Pathological Division, Bureau of Animal Industry, U. S. D. A., Washington, D. C.): We have a large supply, and many have been sent out, but not to the extent that they should be. We have tried to publicize it as much as possible, and we think all the poultry pathologists should do the same thing. It is quite a good piece of work and will help in the control from the sanitary standpoint.

They are available in considerable quantities, and we have given permission at times to poultry dealers and others to make such abstracts as they wish of the publications, giving credit to the source, and to use it in the trade.

I would like to say a word or two about this meeting. This is a practical demonstration of a coördinated research program in action. The meeting at Baltimore developed the coördinated program, and we have here today a result of that. I congratulate the chairmen of the various committees for the most excellent report that has been made today.

I think that all of the poultry pathologists who were not in attendance at the Baltimore meeting should coördinate their activities with the chairmen of the various committees. We are off to a very good start, and I want to congratulate the chairmen of the committees.

DR. BYERLY: I would like to make one more remark concerning your question, Dr. Hendershott. The journal of the feed trade reprinted the publication editorially. Virginia and Missouri put in their own sanitation programs which are markedly similar to this one.

DR. HENDERSHOTT: All credit is due the committee for the splendid work that has been done and continues to be done in connection with this particular disease. I think in all fairness we should not lose sight of the fact that this work was stimulated by the federal Bureau of Animal Industry, and a great; great deal of the credit belongs to Dr. B. T. Simms for having inaugurated such a program.

The regulatory officials wish and hope that this same type of thing will be carried on with respect to diseases of other forms of livestock. We realize that we have a problem on our hands with foot-and-mouth disease, and that is taking a great deal of the time of the personnel of the Bureau. At the same time, there are other problems that are facing us, particularly one in brucellosis.

We are awaiting the day when Dr. Simms will call together some members of the veterinary profession to try to work out a coördinated program to control brucellosis. We thought we might stimulate him a little bit at this meeting, tell him we are looking forward to it and, at the same time, lay a laurel wreath at his feet for having done a good job in connection with poultry diseases.

DR. BEAUDETTE: Are there any more remarks from the floor? If not, the panel will consider that it has discharged its duty.

. . . The meeting adjourned at 11:10 a. m. . . .

Section on Poultry

Thursday Morning, August 21, 1947

The second session convened at 9:05 a. m., chairman Pomeroy presiding.

[Motion Picture—Pullorum Disease Control, California State Department of Agriculture.]

CHAIRMAN POMEROY: According to the program, we are now ready to entertain nominations for the section officers. As you recall, each section nominates one or more individuals for each of the two posts, chairman and secretary, and the names are given to the president, who selects the officers for the section for the coming year. So at this time I will entertain nominations for chairman of the Section on Poultry.

DR. HUGH HURST (Salt Lake City, Utah): Mr. Chairman, I have noticed at these meetings for the last seventeen years that Dr. Durant has never missed a meeting. He seems to be thoroughly competent and able. I would like to nominate him for that position.

CHAIRMAN POMEROY: All right. We have the nomination of Dr. Durant.

DR. JUNGHERR: Mr. Chairman, I should like to place in nomination Dr. J. P. Delaplane as chairman for the ensuing year.

DR. DURANT: Mr. Chairman, I would like to withdraw my name. I appreciate the honor, but it would be impossible for me to serve if elected.

DR. HURST: I will accept his withdrawal.

CHAIRMAN POMEROY: Dr. Delaplane has been nominated.

DR. CHARLES H. CUNNINGHAM (East Lansing, Mich.): I move the nominations be closed.

. . . The motion was duly seconded. . . .

CHAIRMAN POMEROY: It has been moved and seconded that the nominations be closed, and Dr. Delaplane will be elected chairman of the Poultry Section.

. . . The motion was put to a vote and carried. . . .

CHAIRMAN POMEROY: John, you have a job. Really, the task of any organization is performed by the secretary, and the man who assumes this rôle of secretary, as Dr. Delaplane fully realized this past year, carries the load and the chairman takes the honor for the work done by the secretary. Also, keep in mind that the meeting next year will be in San Francisco. At this time I will entertain nominations for secretary of the Section on Poultry.

DR. BRANDLY: I would like to nominate Dr. W. R. Hinshaw of the University of California. He will be on the job, and everybody knows there is no one better qualified than Bill Hinshaw.

CHAIRMAN POMEROY: We have the nomination of Dr. Hinshaw of the University of California, at Davis, Calif. Are there any other nominations?

DR. MOORE: I move that the nominations be closed, Mr. Chairman.

. . . The motion was duly seconded. . . .

CHAIRMAN POMEROY: Discussion? All those in favor of Dr. Hinshaw of California as secretary of this Section on Poultry signify by the usual sign; opposed. So Dr. John Delaplane and Dr. Hinshaw of California will be your officers for the coming year. John, would you like to say a few words at this time?

DR. J. P. DELAPLANE (Kingston, R. I.): I would like to say, Ben, that there is quite a lot of work connected with the secretaryship, but that job was made easier for me through the efforts which you put forth last year in your suggestions.

In that connection, I would like you to keep in mind that shortly after the first of the year you will be approached by letter calling attention to next year's program, and I hope you will realize that those deadlines you find stated in the letters you will receive mean business. This year, we had a number of papers that came to our attention after the deadline, and if you will all be prompt in letting your secretary know that you have something to present next year in California, I am sure that he will appreciate it because it helps the secretary to round out his program. Those deadlines are rather strictly followed. I think that is all I have to say.

CHAIRMAN POMEROY: I see that he is off to a good start here. Is there any other business to be brought before this section before we start on the official program?

Dr. Durant has to use a sound film for his presentation, and there are three projectors in use, with only two operators. So at this time we will deviate a little in our program and call upon Dr. Jungherr to present his paper on "Naturally Acquired Passive Immunity to Infectious Bronchitis in Chicks," by Dr. Jungherr and Naomi Terrell of the Storrs Experiment Station, Storrs, Conn. Dr. Jungherr!

. . . Dr. Jungherr read the paper prepared by himself and Miss N. L. Terrell. . . .(Applause.) (To be published.)

CHAIRMAN POMEROY: Thank you, Dr. Jungherr. In order for us to get back on schedule because of the loss of time sustained in starting, I am going to withhold discussion until after the next paper. So keep in mind the questions that you would like to ask Dr. Jungherr and ask them following the paper by Dr. Durant. We will discuss those two papers in order.

At this time we will have the paper, "New Types of Fowl Paralysis Artificially Produced by Direct Blood Transfusions" by Drs. A. J. Durant and H. C. McDougle, University of Missouri, Columbia, Mo. Dr. Durant!

. . . Dr. Durant read the paper prepared by himself and Dr. McDougle. . . . (Applause.) (To be published.)

CHAIRMAN POMEROY: Do you have any questions you would like to ask Dr. Durant? (Discussion to be published with paper.)

CHAIRMAN POMEROY: Thank you, Dr. Jungherr and Dr. Durant. We have ample time and on the next three papers we will have room for further discussion. The next paper is "Sulfathiazole as an Aid to Control of Fowl Cholera" by Dr. H. M. DeVolt of College Park, Md. Dr. DeVolt!

. . . Dr. DeVolt read his paper. . . .(Applause.) (Paper and discussion to be published.)

CHAIRMAN POMEROY: Since the next paper is along the same line with a different sulfa drug, Dr. Alberts and Dr. DeVolt can get together. At this time we will have a paper on "Sulfamerazine in the Treatment of Fowl Cholera in Turkeys," by Dr. J. O. Alberts of the College of Veterinary Medicine, Urbana, Ill.

. . . Dr. Alberts read his paper. . . . (Applause.) (To be published.)

CHAIRMAN POMEROY: I know some of you want to go to the General Session at 11 o'clock. The next paper is of considerable importance to all of us, "Suitability of S. Pullorum Strains Used in the Agglutination Test for Pullorum Disease Control," by Dr. M. L. Wright of Guelph, Ont.

DR. WRIGHT: Mr. Chairman, since we are over the time limit, I am going to make my remarks pointed, and I can assure you that the remarks made can be supported by laboratory evidence.

. . . Dr. Wright read his paper. . . . (Applause.) (Paper and discussion to be published.)

CHAIRMAN POMEROY: I understand we have five minutes before the General Session will open. Are there any other questions from the floor?

I know we are waking up to the fact that we got plenty of variant in Minnesota. Unfortunately, some of our poultry men have been ahead of us a little bit on that. Are there any other questions? If not, then we stand adjourned.

. . . The meeting adjourned at 11:20 a. m. . . .

Section on Research

Wednesday Afternoon, August 20, 1947

The first session of the Section on Research, held in connection with the Eighty-fourth Annual Session of the American Veterinary Medical Association, at the Netherland Plaza Hotel, Cincinnati, Ohio, convened at 1:45 p. m., Dr. Ronald

Gwatkin, Ottawa, Ont., chairman of the section, presiding.

CHAIRMAN GWATKIN: I will open the first session of the Section on Research. There are "opening remarks by the Chairman," which are going to be very brief indeed. We have arranged to take twenty minutes for each speaker, as you were notified, and ten minutes for discussion. There is the probability that our first paper is eliminated, so we might manage to be a little more generous if the necessity arises. The first paper is cancelled through an unfortunate bereavement in the family of Dr. Delez. The first paper, then, on our program will be "The Etiology of Swine Dysentery," by Dr. L. P. Doyle, Lafayette, Ind. Dr. Doyle!

. . . Dr. Doyle read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Thank you, Dr. Doyle, for your interesting presentation. If there are questions or any discussion, we are ready. (Discussion to be published with paper.)

CHAIRMAN GWATKIN: Any further discussion? Two of our speakers are temporarily missing, so I will ask Dr. Schalm to proceed with his paper, "Utility of the Hotis Test as an Indication of Coagulase-Positive Staphylococci in Milk Samples."

. . . Dr. O. W. Schalm, Berkeley, Calif., read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: We thank Dr. Schalm for his interesting presentation. Any questions? Discussion will now be in order. (Discussion to be published with paper.)

CHAIRMAN GWATKIN: Any further questions? If not, thank you very much, Doctor. We had to shift the order of our program a little, and we will return to it. The next presentation will be "Species Susceptibility to the Viruses of Carré and Feline Panleucopenia," by Dr. L. J. Goss of New York. Dr. Goss!

. . . Dr. Goss read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Dr. Goss' interesting and useful observations are now open for discussion. (There was no discussion.)

CHAIRMAN GWATKIN: The next item on our program is "Acute Pulmonary Emphysema in Cattle," by Dr. F. W. Schofield of Guelph, Ont. Dr. Schofield just got back from Europe. I think he hit Guelph only yesterday, so he had to get here in a considerable hurry to be with us. We are very glad to have him. The floor is now yours, Dr. Schofield.

DR. F. W. SCHOFIELD (Guelph, Ont.): Well, gentlemen, I found this out, that if you want to get through Europe without any particular difficulties you had better take along American dollars. If you have American dollars and can talk through your nose, you will get any place. (Laughter.) Being English, I was held up all along the line.

. . . Dr. Schofield read his prepared paper. . . . (Applause.)

CHAIRMAN GWATKIN: Are there any questions? (Discussion to be published with paper.)

We will proceed to the last item on our program this afternoon, "Renal Tubular Excretion of Penicillin," by Dr. S. H. Beyer of Glenolden, Pa.

We were quite struck by the practical applications that lay in this. Some of it was out of my depth. When I had the privilege of seeing a preview of it, it seemed to me to be of considerable interest to this body. Dr. Beyer!

. . . Dr. Beyer read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Thank you, Dr. Beyer, for your very interesting presentation. The paper is now open for discussion. (Discussion to be published with paper.)

CHAIRMAN GWATKIN: Are there any other questions? Thank you, Dr. Beyer. This brings our program for the afternoon to an end, unless anyone has anything he wishes to bring up. No one has anything? Then we stand adjourned until tomorrow afternoon.

. . . The meeting adjourned at 4:40 p. m. . . .

Section on Research

Thursday Afternoon, August 21, 1947

The second session convened at 2:35 p.m., Chairman Gwatkin presiding.

CHAIRMAN GWATKIN: We will get ahead with the business of our second and last session of this section. The next thing is nominations for section officers. We will now receive nominations for chairman. As you know, we only nominate the officers for the section, they are sent forward and the President appoints them. I understand from the Constitution that, if more than one is appointed from this group for each office, the selection is made by the president. Nominations for office of chairman for the next committee are now in order.

DR. THORPE: I would like to nominate the present secretary, Dr. Murphy.

CHAIRMAN GWATKIN: We have the nomination. Are there any other nominations for the office of chairman? You do want your officers of the section to be able to attend the San Francisco meeting. Are there any other nominations for chairman? Nominations for secretary are now in order.

DR. CHESTER F. CLARK (Lansing, Mich.): I would like to place the name of Dr. O. W. Schalm as nominee for secretary of next year's section.

DR. DONALD W. BAKER (Ithaca, N. Y.): Just to make it more interesting, I would like to nominate Dr. Wendell R. Krull, professor of parasitology at Colorado State College.

CHAIRMAN GWATKIN: We now have two nominations for secretary, Dr. Schalm and Dr. Krull. Any other nominations?

DR. MARSH: I move that the nominations be closed.

. . . The motion was duly seconded, put to a vote and carried. . . .

CHAIRMAN GWATKIN: Then we have these nominations: For chairman, Dr. James Murphy, and two nominations for secretary, Dr. O. W. Schalm and Dr. Wendell R. Krull. They will be duly sent forward to the president.

Before we pass on to the actual program, I would like to say a word of appreciation in behalf of the secretary and myself for the coöperation we have received from all of you to whom we wrote for material for the program. We at least received very prompt answers. Everybody came well up to the deadline, and it made the job a great deal easier.

As you know, there is quite a bit of fussing around and writing back and forth, and we appreciate your help very much. We bespeak the same help for our successors, and I should like to thank you personally for having given me the opportunity of serving as chairman of this section. I got it, I think, under false pretenses when we thought that the meeting was going to be in Toronto. We fully believed that it would be. I hope in the not too distant future we shall meet there because they have lifted the restrictions on hotel accommodations.

The first paper we have this afternoon is "Ketosis," by Dr. J. C. Shaw of College Park, Md. I mention here our ruling which we have

adhered to fairly well throughout our meetings, twenty minutes for the paper, which leaves ten minutes for discussion. Dr. Shaw!

. . . Dr. Shaw read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Thank you very much, Dr. Shaw. We will have a few minutes for discussion. (Discussion to be published with paper.)

CHAIRMAN GWATKIN: Thank you very much, Dr. Shaw. I hate to curtail the discussion, but we do have to be fair to the other people on our program. The next presentation is "Research on Swine Brucellosis in the Bureau of Animal Industry," by Dr. C. A. Manthei of Beltsville, Md. Dr. Manthei!

. . . Dr. Manthei read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Thank you, Dr. Manthei. I think you are to be congratulated on such a vast amount of information in such a short time. Are there any questions or is there any discussion on Dr. Manthei's presentation? (Discussion to be published with paper.)

CHAIRMAN GWATKIN: Any further questions? Our next presentation is "Brucella Therapy," by Drs. C. M. Cotton and R. E. Swope, College Park, Md. Dr. Cotton, the floor is yours!

. . . Dr. Cotton read the paper prepared by herself and Dr. Swope. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Are there any questions or suggestions on these interesting results? (Discussion to be published with paper.)

CHAIRMAN GWATKIN: We will proceed to our last paper. The chairman thought it would be a good idea to snag the secretary for a paper. He was easy to get, and he was interesting last year, so we got Dr. James M. Murphy to give us something on "Post-Treatment Occurrence of Streptococcal Infection of the Bovine Udder." Dr. Murphy!

. . . Dr. Murphy read his prepared paper. . . . (Applause.) (To be published.)

CHAIRMAN GWATKIN: Thank you, Dr. Murphy. Are there any questions, or is there any discussion? (Discussion to be published with paper.)

CHAIRMAN GWATKIN: Is there business that anyone desires to bring up in connection with the section? If not, we would like to thank everyone who has contributed to the program and, as I said before, for having made it so much easier for us by being prompt in replying. I hope you all enjoyed the meeting and the discussions as much as I have. I now declare the meeting adjourned.

. . . The meeting adjourned at 4:50 p. m. . . .

Section on Sanitary Science and Food Hygiene

Wednesday Afternoon, August 20, 1947

The first session of the Section on Sanitary Science and Food Hygiene, held in connection with the Eighty-fourth Annual Session of the American Veterinary Medical Association, at the Netherland Plaza Hotel, Cincinnati, Ohio, convened at 1:45 o'clock, Dr. J. H. Steele, Washington, D. C., chairman of the section, presiding.

(Motion Picture, Quality Milk Products. U. S. Public Health Service.)

CHAIRMAN STEELE: This is the Section on Sanitary Science and Food Hygiene. I am Dr. Steele, the chairman, and this is Dr. Shull, the secretary of the section. We will proceed with the program. I tried to balance a program that would put forth the veterinarians' interest in public health and would demonstrate and review some of the work going on in the nation at this time with the various state health departments and research institutions. Many state health departments are inaugurating such programs and doing research in the establishment of certain animal diseases such as rabies. Tomorrow afternoon the program will wind up with the round-table discussion on veterinary public health. To make this round table successful, we will need your coöperation in submitting questions to that board. Dr. Burney, state health officer of Indiana, will be the moderator. Dr. Miller of Colorado, a practitioner and a member of the Colorado legislature, will review the problems from the practitioner's point of view and the legislative, and I, representing the Public Health Service, will attempt to discuss the problems from our investigative point of view. At this time, we will start with the program.

... A few announcements were made by Dr. Shull. ...

CHAIRMAN STEELE: The first item on the program this afternoon is "The Public Health Significance of Animal Salmonella Infections," by Dr. A. H. Wolff, who is a member of the U. S. Public Health Service, assigned to the Michigan Department of Health where he works in coöperation with the State Health Department. Dr. Wolff!

... Dr. Wolff read his paper. ... (Applause.) (To be published.)

CHAIRMAN STEELE: Thank you, Dr. Wolff. Will you remain here a few minutes? There is time for questions from the floor. We will have to limit them to six minutes, if there are to be any questions at this time. (Discussion to be published with paper.)

CHAIRMAN STEELE: The next paper is "Veterinary Public Health Administration," by Dr. Martin D. Baum of Los Angeles, Calif. Dr. Baum has been the chief veterinarian of the city of Los Angeles and recently came to the U. S. Public Health Service.

... Dr. Baum read his paper. ... (Applause.) (To be published.)

CHAIRMAN STEELE: Thank you, Dr. Baum. Are there any questions from the floor now? Dr. Baum will answer a few of them here. (Discussion to be published with paper.)

CHAIRMAN STEELE: The next paper is by Dr. E. S. Tierkel, entitled "Inauguration of Rabies Control Studies in the U. S." Following this talk a strip film will be shown. This film is only shown for technical advice. It will not be available for three or four months when the finished version is made, but we got it together for a preview at this session to receive your constructive criticism.

... Dr. Tierkel read his paper, following which the film, "The Fight Against Rabies," was shown. ... (Applause.) (To be published.)

CHAIRMAN STEELE: We will be able to entertain one or two questions, but they could be brought up at the round table tomorrow. Are there any questions at this time? (Discussion to be published with paper.)

CHAIRMAN STEELE: The next feature of the program is "Poultry Inspection as Part of the Public Health Program," by Dr. Paul Brandly of the Department of Agriculture, Washington, D. C.

... Dr. Brandly read his paper. ... (Applause.) (To be published.)

CHAIRMAN STEELE: Thank you, Dr. Brandly. Are there any questions from the floor? If there are no questions, we will proceed with the program, then.

The next paper is "Quaternary Ammonium Compounds as Disinfectants in Veterinary Practice," by Dr. E. C. McCulloch of Washington State Veterinary College.

... Dr. McCulloch presented his paper. ... (Applause) (To be published.)

CHAIRMAN STEELE: Are there any questions from the floor? You can direct them to Dr. McCulloch. (Discussion to be published with paper.)

CHAIRMAN STEELE: Thank you. Tomorrow afternoon we meet in the Pavilion Caprice. Have your questions ready and I know we will have a good session.

... The meeting recessed at 5:40 o'clock. ...

Section on Sanitary Science and Food Hygiene

Thursday Afternoon, August 21, 1947

The second session convened at 2:40 p.m., Chairman Steele presiding.

[Motion Picture—Meats with Approval. The AVMA Film Library.]

CHAIRMAN STEELE: The meeting will proceed. Before starting the panel, we will entertain nominations for officers next year. The nominations for chairman are now open.

DR. TIERKEL: I would like to nominate Dr. Martin Baum as chairman of the Section on Sanitary Science and Food Hygiene for the next year.

... The motion was duly seconded. ...

DR. G. E. MITCHELL (Memphis, Tenn.): I would like to nominate Dr. C. H. Pals as chairman for the next year.

... The motion was duly seconded. ...

CHAIRMAN STEELE: Are there any further nominations? If not, would somebody move that the nominations be closed?

DR. MOORE: I move that the nominations be closed.

... The motion was duly seconded. ...

CHAIRMAN STEELE: Nominations are now open for secretary for the next year.

DR. BRANDLY: I would like to nominate Dr. W. N. Cochran.

... The motion was duly seconded. ...

DR. TIERKEL: I would like to nominate Dr. Gaylord K. Cooke of California.

... The motion was duly seconded. ...

CHAIRMAN STEELE: Are there any further nominations? Will somebody move that the nominations be closed?

... Upon motion duly made and seconded, it was voted that the nominations be closed. ...

CHAIRMAN STEELE: During the next paper, we will obtain some paper and we will pass out the ballots immediately following Dr. Rice's paper. We will now proceed with the program.

I wish to introduce Dr. T. B. Rice, professor of preventive medicine at the University of Indiana Medical School, speaking on "Brucellosis as an Occupational Disease." It is a pleasure to have you here today, Dr. Rice.

DR. RICE: It is a pleasure to be here today, because I think our professions are very similar.

... Dr. Rice read his paper. ... (Applause.) (Paper and discussion to be published.)

CHAIRMAN STEELE: Thank you very much, Dr. Rice. Now, we will go on with the meeting.

There was another person nominated for secretary, Dr. Cochran. He will not be available, and I will reopen the nominations for secretary if there should be any others. If there are no other nominations it will stand as it is then, Dr. Pals and Dr. Baum nominated for chairman and Dr. Cooke of California for secretary.

While the ballots are being distributed and filled out, will the members of the panel step up to the platform? We will introduce them during that time. Dr. Bryan, Dr. Miller, and Dr. Burney. Gentlemen, these are the members of the panel of experts to answer your questions this afternoon about the veterinarian and public health. Dr. L. E. Burney on my left is the moderator. His position is health officer of the state of Indiana. On my right, Dr. N. J. Miller of Eaton, Colo., a practitioner and a member of the Colorado legislature who was largely responsible for getting the public health legislation through this past year. Now, Dr. C. S. Bryan. Many of you are acquainted with his work in milk sanitation when he was in the field of bacteriology, and at present he is dean of Michigan State College.

While we are waiting for the ballots to be collected, if you have any questions to be directed to the platform, we will be glad to receive them. Otherwise, you may stand and direct the questions to the moderator who will redirect them here or answer them himself.

We will turn the meeting over to Dr. Burney, our moderator for the afternoon. (Panel discussion to be published.)

CHAIRMAN STEELE: Before closing the meeting, I wish to thank these members for coming and participating in this panel. Dr. Bryan, Dr. Miller, and Mr. Burney, I think you have contributed a great deal here this afternoon. We will all go away with new ideas about public health and a little clarification of the administrative problems.

Now, two things were brought up from the floor during the panel discussion on which I want to take action before relinquishing the chairmanship of this section. Colonel Dildine brought up the point of the resolution. I will appoint Colonel Dildine to draft such a resolution and give it to the secretary of the meeting opening in San Francisco, for action to be taken on it as new business. I will appoint Dr. Baum to investigate and present recommendations for the name of the section, to be presented to the new secretary at San Francisco in 1948.

With that, if there is no further business we will close this session. We stand adjourned.

... The meeting adjourned at 5:00 o'clock. ...

COMMITTEE REPORTS

Adopted at the Eighty-Fourth Annual Meeting

of the

American Veterinary Medical Association

Cincinnati, August 18-21, 1947

Standing Committees

Council on Education

The Council on Education held three meetings during the past year, one in Boston and two in Chicago. The "Essentials of an Acceptable Veterinary School" have been revised. They have been approved by the Executive Board, and will be presented to the House of Representatives for their approval at the time of the annual meeting in Cincinnati.

All accredited veterinary colleges in the United States and Canada have been inspected since the Council on Education was officially authorized. As a result of these inspections, the Council has found that none is without a weakness in one department or another. The majority of schools are giving satisfactory work in the basic sciences. In most of the institutions, the clinical courses should be improved and should yield immensely better training than it is now possible for students to receive. The conditions in three schools, weak in both preclinical and clinical courses, have caused the Council to place them on "council probation." This means that they do not meet the minimum standards of the "Essentials of an Acceptable Veterinary School" and, if satisfactory improvement is not made within a reasonable time, they will be placed on public probation. The colleges placed on council probation will be inspected annually until they either have achieved the set standards or have been rejected by the Council.

All colleges are finding it difficult to maintain well-trained and adequate teaching staffs, particularly with respect to the younger staff members who are in the lower salary bracket. College administrative groups continue to inbreed by recruiting from their own recent graduates instead of from outside sources. The majority of colleges continue to enroll more students than can be properly trained, particularly in clinical courses.

Again, inspection of the school of veterinary medicine at Middlesex University was requested. This was carried out by a committee of the Council in conferences with officials of the Einstein Foundation and of Brandeis University, successor to Middlesex University. Quoting the recommendations of the Council:

"As a result of the information gathered on this visit to this institution, your representatives consider neither the existing staff nor facilities as in any way approaching satisfactory standards for an acceptable school. We recommend that the Council continue to regard the school as unsatisfactory and to withhold approval from it until it has been clearly established that satisfactory conditions have been created."

The most recent action reported by the provost of Brandeis University is to the effect that the veterinary educational project will be discontinued.

The subcommittee on foreign veterinary colleges has been busily engaged in gathering information on schools in all parts of the world. The results of surveys thus far conducted are being compiled and mimeographed. This information will be made available to the veterinary examining boards and to other interested official agencies.

Proposed new schools of veterinary medicine are meeting with numerous and difficult barriers. According to the March, 1947, report of the publication "California Agriculture," the school of veterinary medicine at the University of California will be housed in a specially designed group of buildings on the Davis campus of the College of Agriculture. It is further stated that "the earliest possible date when the facilities for the professional school might be ready would be September, 1948, with a later date a possibility."

Precise knowledge of the status of the other proposed veterinary schools continues to be lacking. The University of Illinois, which received an appropriation in 1945 for the development of a school of veterinary medicine, has not as yet found it possible to accept a freshman class in the professional course. The University of Minnesota is exploring every possibility of securing additional physical space that will permit the acceptance of a small freshman class in veterinary medicine in October of 1947.

The Council recommends that the following colleges be accredited by this association for the coming year, subject to reinspection and review, and their graduates be eligible for membership in this association:

1) Alabama Polytechnic Institute, Division of Veterinary Medicine.

2) Colorado Agricultural and Mechanical College, Division of Veterinary Medicine.

3) École de Médecine Vétérinaire de la Province de Quebec, Université de Montreal.

4) Iowa State College, Division of Veterinary Medicine.

5) Kansas State College, School of Veterinary Medicine.

6) Michigan State College, School of Veterinary Medicine.

7) New York State Veterinary College, Cornell University.

8) The Ohio State University, College of Veterinary Medicine.

9) Ontario Veterinary College, University of Toronto.

10) University of Pennsylvania, School of Veterinary Medicine.

11) Texas Agricultural and Mechanical College, School of Veterinary Medicine.

12) State College of Washington, College of Veterinary Medicine.

W. L. BOYD, Chairman
JAMES FARQUHARSON, Secretary

W. A. AITKEN	W. A. HAGAN
SETH C. DILDINE	S. W. HAIGLER
GARTH A. EDGE	C. C. HASTINGS

M. S. SHAHAN

Legislation

Two major items of national legislation have been of special interest and concern to the Committee and the Association during the past year.

FOOT-AND-MOUTH DISEASE LEGISLATION

The outbreak of foot-and-mouth disease which started in Mexico late in 1946 demanded prompt consideration and action. In this emergency, Congressman George W. Gillie, a member of the Committee, played a leading rôle. He headed a special five-man subcommittee of the House Committee on Agriculture to study the situation and conduct informal hearings. As a result of these hearings, plus conferences with BAI Chief Simms and other officials, and in accordance with recommendations made by a joint Mexican-United States Agricultural Commission, Congressman Gillie sponsored and introduced the enabling act requested by Secretary of Agriculture Anderson to authorize coöperation of the United States with Mexico in combating the outbreak of foot-and-mouth disease. The bill was introduced in the House on Feb. 10, 1947, and was approved on February 21; a similar bill was passed by the Senate at about the same time and was signed by President Truman on Feb. 28, 1947. Subsequently, Congress approved an emergency appropriation of $9 million, the amount recommended by the Mexican-United States Commission as the contribution needed from the U. S. to help carry on an effective eradication program in Mexico up to June 30, 1947.

For a full account of all developments in the Mexican foot-and-mouth disease situation, members are referred to the JOURNAL, which has carried a complete summary of events, beginning with the March, 1947, issue.

THE OFFICER PERSONNEL ACT OF 1947

In some respects, at least profession-wise, this item of legislation has, perhaps, more serious implications than the preceding one. The Army Promotion Bill, so-called, was introduced in Congress on March 13, 1947, and was contained in identical bills, S-904 and HR-2536, respectively. These bills contain features which are most objectionable with respect to the status of Veterinary Corps officers, namely:

1) The requirement that veterinarians enter the Army as second lieutenants and serve in that grade for one year prior to becoming eligible for promotion to first lieutenant.

2) The service credit for veterinary officers at initial appointment of only two years, as compared to three years for officers of the Dental Corps, Corps of Chaplains, and Judge Advocate General's Department, and four years for officers of the Medical Corps.

3) No provision for the grade of general officer for the Veterinary Corps.

The objectionable features as cited in (1) and (2) above are related largely to the fact that, in figuring the service credit for veterinary officers, much weight was given to the minimum requirement of only one year of preveterinary training as established by the AVMA Council on Education, plus the lack of any internship system, as such, in veterinary medicine.

The objections of the Association to the proposed measure were set forth in a letter to Secretary of War Patterson under date of April 9, 1947. (See the JOURNAL, May, 1947, pp. 340-341.) Other actions taken by association officers and members to correct the deficiencies of the bill included an able and well-documented speech before the House on April 2, 1947, again by our colleague, Congressman Gillie. Also, the Board of Governors designated President-Elect Hagan and Executive Secretary Hardenbergh to attend hearings on the bills before the Senate and House Committees on Armed Services. At the suggestion of the Board, President R. R. Dykstra of the Association of American Veterinary Deans also arranged to appear at the hearings in Washington; it was expected that Dean Dykstra and Dean H. D. Bergman would represent the deans' association.

Under date of April 11, 1947, the AVMA directed letters to selected individuals in over thirty states represented on the Senate and House Committees; these letters requested the help of these individuals in urging the committee members to make suitable amendments to the bills while still in committee.

At the time of writing this report (May 1), the outcome of efforts to correct the objectionable features of the promotion bill was not at all certain; hearings had not yet been conducted. In any case, a concerted effort was made.

RECOMMENDATION

It is apparent that the Army Veterinary Corps, in particular, and the veterinary profession, in general, are suffering a penalty in the provisions of the "Officer Personnel Act of 1947" which relates directly to the minimum requirement of only one year of preveterinary training established by the Council on Education. Your committee is aware that this has been a matter of frequent discussion and occasional consideration for several years and that there are valid differences of opinion about the desirability and wisdom of raising the preveterinary requirement to a minimum of two years. In the judgment of the Committee, we are witnessing a condition almost identical to that which preceded the long-deferred adoption of the one-year college training requirement for admission to accredited veterinary schools. In this instance, however, we are faced with an obviously undesirable professional rating which has resulted in an equally undesirable and specific effect upon one branch of our profession.

Therefore, the Committee respectfully recommends that the Council on Education and the Association of American Veterinary Deans, jointly, study the feasibility and desirability of a minimum requirement of two years of preveterinary training and that the Council on Education include this matter in its next annual report.

s/J. G. HARDENBERGH, Chairman

C. C. FRANKS	H. C. GIVENS
GEORGE W. GILLIE	N. J. MILLER

Resolutions

RESOLUTION NO. 1

WHEREAS, the American Veterinary Medical Association is deeply interested in the campaign being jointly waged by the Governments of the United States and Mexico against Foot-and-Mouth Disease in Mexico; and

WHEREAS, our profession is fully cognizant of the great danger which the presence of this

dread disease constitutes to the entire economy of the North American continent;

THEREFORE, be it resolved this Association places itself on record as follows:

I.

The program of slaughtering all infected and exposed susceptible animals and the complete destruction of the hides and carcasses by immediate burial, together with rigidly enforced quarantine regulations and thorough disinfection is strongly endorsed and approved as being the only reliable method by which eradication of the disease can be accomplished.

II.

The capable direction of Secretary of Agriculture, Clinton P. Anderson, and the energetic and intelligent efforts of Dr. B. T. Simms, Chief of the Bureau of Animal Industry, and the assistance given him by the personnel of that Bureau and the work of the Joint Commission of the United States and Mexico is approved and commended and this Association tenders its assistance in the gigantic task of eradicating the disease in Mexico.

III.

This Association commends the Congress of the United States for its foresight in sending its committee headed by the Honorable Dr. George W. Gillie to investigate the conditions existing in Mexico and in appropriating the funds necessary to conduct the campaign of eradication in Mexico and expresses the sincere hope that such conduct will be continued until complete eradication shall have been accomplished.

RESOLUTION NO. 2

WHEREAS, the Administrative By-Laws require the annual meeting of the American Veterinary Medical Association be held every other year in District No. 1 (the midwest); and

WHEREAS, the meeting has been held customarily during the months of July or August, and which are, as a matter of record, high temperature months in the midwest; and

WHEREAS, many veterinarians refrained from attending the meeting because of the severe hot weather and many of those in attendance have expressed dissatisfaction with the weather experienced at the Eighty-fourth Annual Meeting,

THEREFORE, it is recommended that the Executive Secretary make a survey to determine the month during which members in general would like to have the meeting held.

RESOLUTION NO. 3

WHEREAS, the eighty-fourth annual meeting, originally scheduled for Canada, was of necessity changed to Cincinnati, Ohio; and

WHEREAS, the weather was such as would ordinarily discourage attendance; and

WHEREAS, in spite of this handicap, through the efforts of the Committee on Local Arrangements, a record breaking attendance has resulted; and

WHEREAS, those who attended were adequately housed and superbly entertained.

THEREFORE, be it resolved that the Association express its sincere thanks to the Committee on Local Arrangements, the hotels of Cincinnati, the radio and press services, and to all who contributed to the success of the meeting.

H. D. BERGMAN J. G. HARDENBERGH
R. A. HENDERSHOTT

Biological Products

The Committee submits herewith a list of biological products that are acceptable without reservations. Deviating from the customary procedure, it accepts one product with reservations and comments on another product that is in the experimental stage of development. The importance of the need for additional research on the improvement and development of biological products is also discussed.

Wart Vaccine.—The Committee accepts, with reservations, the wart vaccine. While the controlled laboratory tests are acceptable, it seems advisable to obtain additional evidence on its use under field conditions. Steps are being taken to obtain such information from practitioners who use the product.

Newcastle Disease Vaccine.—The Committee is not ready to accept this product at the present time. The chicken embryo vaccine now available possesses some antigenic properties. Whether the degree of protection produced is adequate and is of sufficient duration under field conditions during an epizoötic have not been adequately shown. Conclusions regarding the efficacy of the vaccine now available, based upon groups of vaccinated birds without controls, are not valid. Attention is called to the fact that current studies on the development of a more efficacious vaccine may prove fruitful. These statements should not be interpreted as discrediting the product now being produced but to point out that Newcastle disease vaccine is still in the experimental stage.

NEED FOR ADDITIONAL RESEARCH ON BIOLOGICAL PRODUCTS

The need for additional information is constantly faced by the Committee on Biological Products. Most of the questions that it deals with can be answered only by the results of carefully controlled research. It is believed that the scope of the Division of Virus-Serum Control of the United States Bureau of Animal Industry should be extended beyond mere control efforts. It should include research on the development of new products. This work should be done in close coöperation with state research laboratories having adequate facilities and staffs, supported in part by grants from the federal government. The results of such research should prove helpful to both practitioners and producers of biological products.

The following biological products are classified as acceptable without reservation for the year 1946-1947:

ANTITOXINS

Antivenin.
Botulinus antitoxin (type A, type B, type C, types A & B, types A, B, & C).
Tetanus antitoxin.

SERUMS

Anthrax antiserum.
Blackleg antiserum.
Bronchisepticus-bacillus antiserum.
Canine-distemper antiserum.
Encephalomyelitis antiserum (eastern).
Encephalomyelitis antiserum (western).
Encephalomyelitis antiserum (eastern and western).
Feline-distemper antiserum.
Gonadin serum.
Hemorrhagic-septicemia antiserum.
Hog-cholera antiserum.
Normal serum.
Swine-erysipelas antiserum.
Streptococcus antiserum.

AGGRESSINS

Blackleg cultural aggressin.
Blackleg natural aggressin.

DIAGNOSTICS

Avian tuberculin.
Mallein.
Tuberculin.

TOXOIDS

Staphylococcus aureus toxoid.
Tetanus toxoid.

VACCINES AND VIRUSES

Anthrax-spore vaccine.
Brucella abortus vaccine, Strain 19.
Canine-distemper vaccine.
Canine-distemper virus.
Encephalomyelitis vaccine (eastern).
Encephalomyelitis vaccine (western).
Encephalomyelitis vaccine (eastern and western).
Erysipelothrix rhusiopathiae vaccine.
Fowl-pox vaccine.
Pigeon-pox vaccine.
Hog-cholera virus.
Ovine-ecthyma vaccine.
Rabies vaccine.
Fowl-laryngotracheitis vaccine.
Feline-distemper vaccine.

BACTERINS

Autogenous bacterin.
Blackleg bacterin.
Clostridium chauvei-septicum bacterin.
Clostridium hemolyticum bacterin.
Clostridium novyi bacterin.

s/H. E. BIESTER, Chairman
G. H. GOOD D. I. SKIDMORE
ASHE LOCKHART F. H. SUITS

Therapeutic Agents and Appliances

The Committee has not considered the merits of any therapeutic agents but has devoted its time to a consideration of the ultimate objectives of its function and the means whereby these objectives can be accomplished. It has been decided that the Committee should function much like the Council on Pharmacy and Chemistry of the American Medical Association. This will require careful consideration of a therapeutic agent's value in the treatment of conditions for which it is recommended. The results of these considerations should be published so that the information will be available to those interested in it.

It is recommended that a group of official rules be drafted by the Committee, which will be observed when considering substances for approval in its list of therapeutic agents. The approval of a therapeutic agent by the Committee shall not be an indorsement but shall mean that it conforms to the rules of the Committee. The rules shall be printed and made available to those desiring them.

It is the opinion of the Committee that greater accomplishments can be made if the chairman is appointed for a period of two years. Funds must be made available to cover expenses involved in printing the rules and the lists of preparations accepted by the Committee. While it is only possible to estimate the cost of such activities, the following (annual) estimates of costs for carrying out this work were made:

Printing and secretarial expenses....$150.00
Committee expenses (meetings, etc.).. 150.00

It is recognized that it will be necessary to continue the financial support if the Committee is to perform a constructive function. It appears that it can do much to discourage the compounding and sale of preparations which possess little therapeutic value. If the Committee is to progress, it is essential that a definite basic set of rules be adopted which will be followed at all times and that the necessary financial support be provided so that these rules can be followed. The approval by the Association of this request for funds shall be regarded as an indorsement of this proposed plan and its desire for careful evaluation of veterinary therapeutic agents.

s/ROGER P. LINK, Chairman
A. N. CARROLL J. V. LACROIX
R. C. KLUSSENDORF H. E. MOSKEY
JOHN L. WELLS

Public Relations

During the war period, when increased production of livestock was urgent, the diseases of animals received much attention. Their economic importance was publicized through various agencies. Livestock men everywhere, made aware of these diseases, suddenly became interested in their control. But, unfortunately, during this period, there were in many communities only enough veterinarians available to care for the most urgent veterinary needs, and the complete service demanded often was unobtainable. Indeed, in some communities, it was difficult and sometimes impossible to obtain professional services even when they were of an emergency nature. This created an excellent opportunity for certain agencies which, like diseases, seem to be ever present and ready to invade the field of veterinary practice. Some of these agencies offered preventive or curative treatments for nearly everything which might affect animals. The treatments usually were such that the owner or caretaker of the animals could easily administer them. Some of these agencies unfortunately have become well-established in certain communities and are now seeking methods to enlarge on their activities. Such an instance has occurred in Rochester, Minn., where before the war some drug stores, feed stores, and hatcheries carried and sold only a few poultry remedies, disinfectants, and tonics. During the war, when attention was focused on the economic importance of diseases of animals, many of these stores enlarged their so-called animal health departments and have flourished. One drug store carried on an active, well-advertised program. This store had such items as penicillin available for farmer's use when it was unobtainable through other channels for veterinarians. A large coöperative dairy situated in Rochester, which receives milk from farms in Iowa and Wisconsin as well as Minnesota, developed its own mastitis-control program. To further enhance their good relations with the farmers supplying them with milk, this company is now looking forward to employing a veterinarian to help further with this program. Undoubtedly, similar conditions and practices also developed in other communities.

These dangerous, unsound conditions and practices should and can be corrected, but it will require the coöperative efforts of all veterinarians. They must give better or a more complete service and coöperate further in developing a well-organized veterinary public relations program to further acquaint the public with the economic and public health importance of veterinary medicine.

The AVMA, with the assistance of Mr. Fairall, during 1946 again prepared and released through newspapers, magazines, and the radio the following articles which dealt with animal health topics:

SUBJECTS OF RADIO PROGRAMS FURNISHED CONSTITUENT ASSOCIATIONS

The following are the subjects of radio programs furnished constituent associations during the last half of 1946 and the first half of 1947.

Heat Stroke in Horses
Sudan Grass and Plant Poisoning
A Fatal Parasite of Livestock
Skin Troubles in Horses
The Cause and Prevention of Colic
Guarding Livestock Health at the Fairs
The Value of Fresh Water for Livestock
Control of Livestock Diseases
Plant Poisoning as A Fall Problem
Nutrition of the Dog
Airplanes and Animal Health
White Muscle Disease in Calves
Control of Fowl Pox
Sanitation and Farm Profits
Manganese in the Rations
Distemper and Your Dog
Veterinarians in the Victory
Swine Mange A Menace to Farm Profits
The Limitations of Brucellosis Vaccination
Nonparasitic Dysentery in Lambs
Paint Poisoning of Livestock
Thyroid Stimulants for Livestock
A Reproductive Disease of Cattle
The Value of Colostrum in Raising Calves
"In-Between" Deficiencies in Swine Nutrition
Protecting American Herds from Possible Germ Warfare
Cornstalk Disease
Sweet Clover Disease
Measures to Control Newcastle Disease
Diseases of Feeder Lambs
Cold Weather Care of Swine and Horses
Cold Weather Care of Cattle and Sheep
Pullorum Disease — A Major Threat to Poultry Production
The Control of Cattle Grubs
New Threat to Meat Production
How to Identify Newcastle Disease in Poultry
A Deadly Blood Disease of Cattle
Internal Parasites of Swine
New Light on Moon Blindness in Horses
Solved: The "Tar and Feathers" Mystery
Treatment of Bovine Mastitis
Reducing Losses of Baby Pigs
Wounds and Wound Infections in Horses
Slowing 'em Down to Build 'em Up
Coccidiosis in Baby Chicks
Sleeping Sickness in Horses
Impaction—A Dangerous Cattle Ailment
"Blue Backs" in Turkeys
Swine Brucellosis — A Murderer Incognito
"Cannibals" in the Hen House

SUBJECTS OF "RADIO BRIEFS"

One hundred and forty-five topics were included in "radio briefs" which were supplied to farm editors of some 300 stations from coast to coast during the past year.

NEWS RELEASES

During the year, 65 topics were subjects of news releases supplied to news services, extension editors, and similar mediums.

The above news items and discussions have been well received and the Committee feels this program should be continued and enlarged if possible.

The Associated Serum Producers Inc., through its educational agency, The American Foundation for Animal Health, again in 1946 sponsored an excellent public relations program which reached a large audience. It called attention to the economic as well as public health importance of diseases of animals and how veterinary science safeguards the livestock industry from the ravages of these diseases. Similar, but less extensive, veterinary public relations programs have been developed and sponsored individually by Armour and Company, Wilson and Company, and various other groups and individuals interested in the welfare of animals and man.

The press during the past year contained many references which paid high tribute to veterinarians and veterinary science. The chairman of this committee received two pages torn from "The Standard" from Toronto, which carried a pictorial story about Dr. Alan Secord's animal hospital. The pictures and story are excellent and it is the kind of publicity we all like to see. It enhances good public relations.

Mr. James Nankivell, executive secretary of the Minnesota Humane Society, in his column which appears each week in the "St. Paul Herald," a weekly newspaper, has frequently paid tribute to veterinarians and veterinary science. But he, in his column which appeared April 4, 1947, also cited an instance which all veterinarians deplored. It dealt with the conduct of a veterinarian who, with his wife, it was stated, had cruelly mistreated a 19-year-old girl in their employ. This story was previously reported in the "National Humane Review." It is both unfortunate and deplorable that any one who classes himself as a veterinarian should be guilty of such cruel, unbecoming conduct. This is the only instance of such unwanted, distasteful veterinary publicity which has come to the attention of the Committee. It is hoped that it will be the last.

The Committee on Public Relations again urges every veterinarian to consider him or herself a committee of one to promote good public relations. Take part in your local, state, and national civic affairs, be a good citizen, and do your part well. This is of fundamental importance if we wish to build up and maintain good public relations.

The chairman of the Committee would like to suggest that this annual report can be made both more useful and interesting if, in the future, each state, regional, county, or district veterinary society will furnish to the AVMA office, not later than March 30 of each year, a brief report on their public relations activities. Such information, if incorporated in the annual report, will aid materially in planning future public relations programs.

The Committee on Public Relations feels that the public relation program of the AVMA would be more effective if it could be better coördinated with the programs of the various regional, state, county, and city veterinary societies. This must be a coöperative activity. But to do this effectively, it would require that the AVMA employ fulltime some one trained and experienced in developing public relations programs.

s/C. F. SCHLOTTHAUER, Chairman
C. D. LOWE — E. C. W. SCHUBEL
A. H. QUIN, JR. — CASSIUS WAY

Nutrition

The need continues for more research papers and case reports to be published in the Nutrition Section of the JOURNAL. Interest in such material is limited only by the failure of the profession to send it to the JOURNAL staff.

THE FEED SITUATION

In spite of bumper crops over the country, feed costs remain high. Returns from livestock and livestock products remain such that pro-

ducers have learned the value of feeding livestock of all kinds. There is no profit in starving animals. The great demand for supplemental feeds has stimulated production of new feeds, notably by-products from agriculture and industry such as former waste products in canning tomatoes and citrus fruits. Considerable experimentation is in progress with waste products from the dehydration of many vegetables and fruits.

Greater utilization of roughages, especially through improved pastures and by supplemental grazing crops, is being practiced in the South and Southeast. Under certain programs, it is now possible to have grazing available for ten and even twelve months of the year. This has been accomplished in the rice belt.

NUTRITION PROBLEMS

Increased appreciation of the value of feeding has failed to eliminate deficiency and other diseases and abnormalities that are, or may be, associated with nutrition. Purebred herds of cattle, especially, continue to be affected with deficiencies of vitamins A and D. Urinary calculi, suspected of resulting from lack of vitamin A, is still a problem in parts of the West. Grass tetany of cattle grazed on lush fields of cereal grass on the plains still takes a heavy toll. Photosensitization with marked involvement of the liver and skin and a simultaneous ulcerative keratosis occurs in animals grazed on green oats as well as clovers.

In the cornbelt, the continued shortage of protein supplements of animal origin is being reflected in the small size of litters farrowed this spring. This is also responsible for the unprecedented loss of baby pigs within seventy-two hours after birth. The excessive losses among weak and undeveloped newborn pigs this spring is the result of an accumulated deficiency of the reproductive factor, present in protein supplements of animal origin, over a period of years.

Another condition extensively observed in brood sows this spring is the cessation of milk flow ten days to three weeks after farrowing, which results in the death of the litters from starvation. The condition can be prevented by adding to the ration 10 to 15 per cent of good ground alfalfa hay and some protein of animal origin during gestation and lactation. Veterinarians should advise swine producers that some protein of animal origin is necessary during this critical period.

Calcium and/or phosphorous deficiencies manifested by an excessive growth of hoofs and enlarged joints are still quite common in feedlot cattle. The present tendency to short-feed cattle has prevented the appearance of some deficiencies.

Education and research in the field of animal nutrition is a most urgent need.

CONTINUED PROGRESS

To mention only a few of the advances in nutrition during the past year: California workers have determined that "acorn calves" result from certain maternal nutritional deficiencies during pregnancy.

From Ohio comes evidence, of the value of colostrum in calf raising. Evidence that a choline deficiency is associated with cancer has been shown by Alabama nutritionists.

s/A. H. GROTH, Chairman
GEO. H. HART L. M. LeGARD
C. C. HASTINGS HUBERT SCHMIDT

Poultry

A report from this committee had not been received at time of going to press.

Parasitology

In its 1945 and 1946 reports, the Special Committee on Parasitology recommended that the Special Committee be abolished and that in its place a Standing Committee be appointed. This recommendation was duly approved by the Executive Board and the House of Representatives in 1946, and the chairman of the 1946-47 Committee was instructed to proceed accordingly. The proposed amendment to the Constitution was, therefore, designed and has been submitted by the Special Committee for publication and approval.

It is believed by the present Committee that this amendment, if approved, will render the work of reporting important advances in parasitology to the Association very much more efficient. As an example, it is the opinion of this Committee that an annual review of the chemotherapy of parasitic diseases be undertaken by the Standing Committee. Not only should anthelmintics be reported upon, but the study should include insecticides, acaricides, coccidiostatic agents, etc., as far as is possible. Such an annual report should serve to recommend, or otherwise, the use of newly developed chemotherapeutic agents and also to inform the Association of substances that are considered outdated or replaced by newer and more efficient agents.

It is also suggested that the extension of the range of certain species of ticks be made the subject of a continued study for annual or biannual report.

In addition to making the above recommendations, the Committee has prepared a report on liver fluke disease in the United States and Canada at the suggestion of two members.

FASCIOLIASIS AND FASCIOLOIDIASIS OF CATTLE AND SHEEP

1) Prevalence and Economic Importance of Fasciola Hepatica and/or Fascioloides Magna in the U. S. and Canada.—***Fasciola hepatica*** is absent or of very limited importance in the eastern states and provinces. In Florida, it occurs in scattered parts but is of limited importance. In parts of New Mexico and Texas, it is of some importance; in some areas of Texas, it is a serious cause of disease and of condemnation of beef livers. In South Dakota, Wyoming, and Colorado, it is present but not common. It is very prevalent in cattle and sheep in Idaho, Nevada, Utah, Oregon, Washington, California, and a limited area in British Columbia. In this far western block of states, it causes a serious loss from condemnation of cattle livers; approximately 64,000 or almost 10 per cent of all cattle slaughtered in this area suffered condemnation of livers in one year. In Puerto Rico, liver fluke infection has been recorded, and serious fascioliasis has been shown by Alicata to occur in Hawaii.

There is a difference of opinion regarding the effect of liver fluke infection in cattle. Of interest is the apparent fact that *F. hepatica* seldom, if ever, causes clinical symptoms of fascioliasis in cattle in Oregon (nor, apparently, other parts of the western block) while in the Gulf states it does appear to be truly pathogenic. The Committee suggests that the reason for this apparent difference would be of fundamental importance and should be investigated. The effect on cattle has been worked out by Dr. Shaw and his associates and it appears that workers in the Gulf states should attempt to determine the reason for differences in pathogenicity, using the Oregon work as a comparison for their studies. There is a possibility that any predisposing factor elucidated might have a wide application in the consideration of other diseases in those states.

2) Animals Affected.—Sheep are highly susceptible to the effects of liver fluke infection, and typical fascioliasis or "liver rot" is produced. Cattle are as easily infected but do not, as a rule, develop clinical fascioliasis. The loss in this latter animal is almost confined to condemnation of livers, except in the Gulf states where fascioliasis occurs in a clinical form. Wild reservoirs of infection are not thought to be of any practical importance, although rabbits play a possible rôle in this regard.

3) Intermediate Hosts.—The studies of two members of the Committee (Drs. Shaw and Krull) and their associates, and of Dr. O. Wilford Olsen, have been of great importance in elucidating the life history of the parasite in various regions. The known intermediate hosts in Oregon are the snails *Lymnaea (Galba) ferruginea* and *Lymnaea (G.) bulimoides*. In the coastal region of Texas, *Stagnicola bulimoides techella*, a closely related snail, is the intermediary. *Pseudosuccinea columella* is an intermediate host in Florida. Elsewhere, potential natural hosts are *Fossaria modicella, Fossaria parva, Stagnicola proxima, Stagnicola caperata, Stagnicola palustris nuttaliana,* and *Succinea nuttaliana*. However, the snails such as the Galbas and Fossarias that do not live in the water at all times, but crawl on surrounding mud and soil, probably are the most important intermediaries. The publication of more data on the life histories and habitats of the snails is to be encouraged, and it is hoped that Dr. Krull and others will have opportunity of bringing such information together. While the situation in Oregon and Texas has been well worked out, it is not certain that the intermediate hosts are the same in other states, and more studies are needed.

4) Control Measures.—Those on the Committee who have had experience with control measures for fascioliasis are of the opinion that the use of copper sulfate, as used in Oregon in particular, and elsewhere, should be encouraged by authorities who are interested in reducing losses from fascioliasis. The Committee is not convinced that it is practical to advise cattle owners to use hexachlorethane as an anthelmintic, because the absence of clinical symptoms of fascioliasis in these animals in the western states makes it difficult or impossible to persuade farmers to adopt treatments aimed against loss from condemnation of livers only. The value of the condemned beef livers should be balanced against the cost of tracing infected areas and applying copper sulfate on the habitats of the snails. As the chemical is now more readily available, the Committee recommends extension of this procedure wherever the state authorities find it economically sound. Where intermediate hosts are present in large numbers on extensive flat areas, such as on the Gulf Coast area in Texas, the use of copper sulfate is impractical, but in rolling or hilly country, where the snail habitats are chiefly along streams, the method can be very effective. Thus, the control measures to be advocated are:

a) Destruction of snail hosts by application of copper sulfate except where an extensive or flat terrain renders this method impractical.

b) The use of anthelmintic medication of infected stock is recommended when clinical fascioliasis occurs, when the destruction of snails as in (*a*) is impractical, or when owners can be persuaded to have cattle treated to reduce the danger that these animals will perpetuate the infection on sheep land. Treatment of animals in the late fall on the Gulf Coast when only adult parasites are present (as advocated by Dr. Olsen) is a method that will reduce the fluke population.

Hexachlorethane (10 Gm./100 lb. live weight) can be used by veterinarians who are asked to treat cattle for fascioliasis in the Gulf states or elsewhere, as carbon tetrachloride cannot be used for cattle.

Carbon tetrachloride is a useful treatment for sheep and can be recommended. One cubic centimeter is efficient against mature flukes, but 5 to 10 cc. are necessary for removal of the immature parasites in the liver. On ranges where sheep are affected, the combination of anthelmintic medication of the animals and the use of copper sulfate on snail habitats is to be recommended. Drainage of low land might be found feasible in certain regions and is recognized as being an efficient control measure.

5) Information.—The Committee will be pleased to supply any needed information and advice on fascioliasis to any state veterinary officer or other veterinarians who contemplate an extension of control measures against *F. hepatica* in sheep, goats, or cattle.

NOTES ON FASCIOLOIDES MAGNA

This parasite occurs in cattle in Texas, Louisiana, and in other areas scattered over the North American continent. It is a natural parasite of deer, but it is doubtful if it causes clinical disease in these animals. While causing condemnation of beef livers, it does not cause clinical disease in cattle as a rule. It is highly pathogenic in sheep and caused the loss of a large percentage of a flock of 650 sheep in northern Ontario in 1943-44. In this case, the sheep were ranging on farms where there were numerous Virginia deer and also habitats of semi-amphibious snails. This occurrence, as well as the transmission of the fluke to new areas by infected elk, which has also been recorded in Canada, is reported by the Committee as a warning to veterinarians to be on guard to detect fascioloidiasis in sheep that may range over territory occupied by deer. No anthelmintic medication is possible and, if the disease occurs in sheep, the destruction of snails or elimination of the deer are the only alternatives to stopping sheep production on the land concerned.

s/W. E. SWALES, Chairman

W. S. BAILEY — W. H. KRULL
D. W. BAKER — R. E. REBRASSIER
H. S. CAMERON — G. DIKMANS
J. N. SHAW

Research Council

A meeting of the Committee on Fellowships of the Research Council of the AVMA was held in Chicago, Ill., June 15, 1946, for the purpose of considering applicants for fellowships. Fellowships were awarded to Dr. Dean Folse, to do graduate work at the University of Minnesota in parasitology; to Dr. M. J. Swenson, to do graduate work at Iowa State College in animal nutrition and biochemistry; and to Dr. H. W. Dunne, to do graduate work at Michigan State College in animal pathology.

As a result of the consideration of these applications, it was decided that, in the future, the Committee on Fellowships would need full power of appointment, since it was impossible to obtain a reaction from the whole Council in sufficient time to make the appointments effective. The annual meeting of the Fellowship Committee for the consideration of applicants was set as the first Saturday in April, unless that date falls between Good Friday and Easter, in which case the date would be the second Saturday in April. All applications for fellowships must be in the hands of the secretary by March 1, and the decisions of the Committee on Fellowships must be in the hands of the applicants not later than May 15.

The Research Council of the AVMA met at the Hotel Statler, Boston, Mass., Wednesday, Aug. 21, 1946. At this time, paragraph 7 of the Rules on Procedure of the Research Council was amended to read as follows:

Of the standing committees, one shall be known as the Committee on Fellowships,

which shall have the functions of receiving applications for fellowships, the appointment of fellows to specific institutions, and the making of grants. The Committee shall be composed of six members which shall include the chairman and secretary of the Research Council. Four members of the Committee shall constitute a quorum for the transaction of business.

At a meeting of the Research Council of the AVMA at the Palmer House, Chicago, Ill., Dec. 3, 1946, the Committee on Fellowships was authorized to make provisions for payment of fees for fellows, should they so desire. Dr. Feldman pointed out that there was an excellent fellowship for training in tissue pathology now available at the Army Institute of Pathology in Washington. The following officers were reelected: Dr. E. T. Hallman, chairman; Dr. R. A. Kelser, vice-chairman; and Dr. H. H. Dukes, secretary.

The Fellowship Committee met April 12, 1947, in Chicago, Ill., to consider the new applications for fellowships. The three fellowships already in operation were continued. In addition, fellowships were granted to Dr. J. H. Drudge, to do graduate work in parasitology at the School of Hygiene and Public Health, Johns Hopkins University; to Dr. E. V. Morse, to do graduate work in bacteriology at the New York State Veterinary College at Cornell University; to Dr. Donald A. Schmidt, to do graduate work in small animal pathology at the Institute of Experimental Medicine, Mayo Foundation, Rochester, Minn.; and to Dr. H. P. Studdert, to do graduate work in physiology at the New York State Veterinary College at Cornell University.

s/J. H. WHITLOCK, Acting Secretary

Registry of Veterinary Pathology

Although the Army Institute of Pathology, Washington, D. C., has maintained an extensive collection of specimens in veterinary pathology since its inception in 1862, the Registry of Veterinary Pathology sponsored by the American Veterinary Medical Association has been in existence only since 1944. During the relatively short time since it was established, interest in veterinary pathology has been greatly stimulated, and an exceedingly active and useful enterprise has been developed which is providing valuable assistance to our teaching institutions and to practitioners. The objectives of the Registry of Veterinary Pathology were outlined in detail in the previous reports of the Committee.

Its growth and its expanding scope of usefulness attests to the need for this activity of our association. The increasing number of practitioners calling upon the Registry to provide professional services indicates a growing appreciation of the importance of pathology to an intelligent understanding of disease processes. Modern veterinary medicine, like modern human medicine, cannot provide an efficient scientific service to its patients without invoking the knowledge that comes from an adequate understanding of pathology. Unfortunately, too often tissue pathology has been relegated to a minor position in the armamentarium of the practicing veterinarian. Consequently, many diagnostic problems in pathologic anatomy have not been understood and have perhaps been improperly managed.

The Registry of Veterinary Pathology has provided a central coöperative agency whereby contributors to the collection receive expert diagnostic or consultative service. The collection of properly classified and accessibly filed materials is made of increasing educational value by providing a place where qualified individuals can come and study, by publication of the results of definitive research on the collection, and by the exchange of materials for training purposes with various veterinary schools. This diagnostic and consultative service does not interfere or compete with any practicing veterinary pathologists because there are few outside of governmental service or educational institutions. It is hoped to encourage young veterinarians to specialize in the field of pathology and to help train and develop them as well as stimulate interest in their activities. This diagnostic and consultative service, the Committee therefore feels, is an important function of the Registry. Its present functions may be better appreciated by recounting briefly some of its activities during the past year:

1) The total number of accessions has increased in the past eleven months from 877 to 1,514,—representing an average of 67 accessions monthly. More recently, new accessions are being received at the rate of 90 to 100 per month. One hundred and two civilian veterinarians are now included in the list of active contributors.

2) The preparation of sets of slides of normal histology has been started, but so far none of the sets has been completed. Tissues for the preparation of slides of normal histology have been collected from dogs, cats, guinea pigs, and swine. The master set for the dog is being completed first. It is contemplated that a syllabus will be prepared to accompany each study set. These study sets will be valuable for use in experimental medical research as well as aids in establishing diagnostic criteria in veterinary pathology.

3) Several teaching institutions have been provided with material. Also a considerable number of slides were requested by, and furnished to, the Massachusetts Board of Registry in Veterinary Medicine.

4) Pathologic materials on file have been used for study by several officers of the Army Veterinary Corps and by a few visitors representing foreign armies. In addition, a few foreign animal pathologists have come to study certain phases of the collection.

5) Efforts have been made to secure material representative of animal diseases which do not occur in the United States. Contacts have been made in foreign countries, and several persons have promised to contribute material.

6) In order to improve the selection and preparation of pathologic material contributed to the Registry and to provide a standard acceptable protocol form, a brochure is being prepared to give guidance on this subject. The Army Institute of Pathology intends to publish this booklet and distribute it within the Army and to civilian contributors to the Registry. It is also planned to prepare, by the assistance of those who are experts in the field, a manual of veterinary autopsy technique. This should be of great value not only to our teaching institutions but to others who perform autopsies on animals.

It is obvious from the foregoing that the Registry is attempting to fulfill the purposes for which it was established. In view of the fact that it has been in operation less than three years, the results to date fully justify its creation.

During the past year, the Committee has obtained a group of outstanding animal pathologists to act as advisors to the Registry of Veterinary Pathology. This group will serve as follows: (a) stimulate interest in the Registry

of Veterinary Pathology, (b) act as consultants on material submitted to the Registry, and (c) make available their experience and talents for any special problems that may arise concerning the Registry.

The following have agreed to serve as advisors:

Dr. J. S. Bengston.—BAI, USDA, Chicago, Ill.
Dr. C. L. Davis.—BAI, USDA, Denver, Colo.
Dr. Peter Olafsen.—New York State Veterinary College, Ithaca, N. Y.
Dr. Carl Olsen, Jr.—University of Nebraska, Lincoln, Neb.
Dr. C. O. Prickett.—Veterinary Chemicals Laboratory, University of Delaware, Newark, Del.
Dr. Hilton A. Smith.—Iowa State College, Ames, Iowa.
Dr. E. L. Stubbs.—University of Pennsylvania, Philadelphia, Pa.

Arrangements have been completed to provide for a fellowship in veterinary pathology. Funds have been allocated by the Research Council of the AVMA, which will be supplemented by a grant from a pharmaceutical concern. George Washington University has agreed to establish the fellowship within the Medical School, with the understanding that the work will be done at the Army Institute of Pathology. This arrangement is most desirable since it contributes to the academic character of the fellowship. So far, no applications for the fellowship have been received, in spite of the fact that the heads of the departments of veterinary pathology of the several veterinary schools have been asked to name likely candidates. It is expected to publicize the fellowship by a brief announcement in the professional veterinary journals.

Excellent publicity for the Registry has been obtained by editorials, from time to time, in the JOURNAL of the AVMA. These have been written by various veterinary pathologists upon the requests of the Committee. Additional editorials of a similar nature will appear in the future. The Committee expresses its warmest appreciation to those who have contributed their time and talents in order to acquaint others with the purpose of the Registry and of the importance of pathology to the fuller knowledge of disease.

As has been set forth in previous reports, the financial support of the Registry of Veterinary Pathology—like the financial support of the other Registries—is a coöperative effort between its sponsoring society and the Army Institute of Pathology. It is obvious that our Registry would be impossible to realize if it were necessary to establish the physical plant, the overhead administration, and technical personnel for its operation. This is true of the several others coöperating with the Army Institute of Pathology. Their exceptionally favorable position by virtue of the integral association with the Army Institute of Pathology should be kept in mind when funds are allocated for the support of our Registry. Since it was established, $1,000 annually has been paid for its partial support. A similar amount is requested by your committee for the ensuing year. In addition, $50 is requested for secretarial services.

As our Registry expands and the services required of it increase in volume, it is quite likely that the amount of our annual contributions will have to be increased. We have reached already the point where, to give adequate service, more technical and professional assistance should be available. Within another year or so, the situation may justify a request for more assistance. This will require additional funds.

The Committee on Registry of Veterinary Pathology had one meeting during the year. This was held at the Army Institute of Pathology, Washington, D. C., March 5, 1947. All members of the Committee were present.

s/WILLIAM H. FELDMAN, Chairman
MAJOR T. C. JONES HARRY W. SCHOENING
COL. J. E. ASH, ex officio

Special Committees

Committee on History

Because popularity of the history of veterinary medicine has yet to be attained, interest in the function of this committee is not easy to arouse among the membership. Not having been set apart as a branch of collegiate work, the rating of history in Association affairs—one may say—is an alien sideline and there it is destined to remain until woven into the college curriculums.

Unaware of the purpose of history as a part of their learning, both old and new members of the profession have, somehow, acquired the impression that the publication of a big history book by the Association is the Committee's objective, notwithstanding that its main purpose is first to cultivate a desire for knowledge of the past for future guidance. The publication of a complete history of veterinary medicine in North America is a remote, not a current, aim. In the face of the limited demand for, and tremendous cost of, such a book, it would have been folly to recommend the publication of so voluminous a work at the Association's risk up to this time, even had someone volunteered to undertake the Gargantuan task. The Committee, for the present, has no choice but that of encouraging the collection and publication of historical sketches in periodical literature and books, and recommending the teaching of history in the colleges. The Committee works to these ends unnoticed. The publication of historical material is systematically done in the Association's mediums, and local and state organizations have been complimented for stepping up interest in that type of veterinary literature. Meanwhile, the writing of a reliable record of veterinary medicine in North America, regardless of the magnitude of the task, is not frowned upon. There is no easy access to the material required because, in this country, there was no continuous flow of responsible periodicals until the second decade of the twentieth century, and in no part of the world during the major part of the nineteenth. In fact, until "Veterinary Medicine," which stems from association work, struck its stride about 1910 and the "American Veterinary Review" became the property of the AVMA for the second time in 1915, records of passing events were sketchy and sometimes biased. The material for an all-inclusive American veterinary history has to be gathered from hither and yon and translated into what appears to be truth. Whereas, long realizing that obstacle, the Committee on History set out without fanfare to make periodical veterinary literature a rich source of contemporary events, from which the future historian will find it easier to compile his data. The range of American veterinary history starts at Boston in 1855, when Drs. George H. Dadd, D. D. Slade (M.D.), Charles M. Wood, and Robert Wood founded America's

first veterinary college. Dr. Slade (Am. Vet. J., (Jan., 1856): 97-106) wrote an excellent article on the history of veterinary medicine, which gives considerable insight into what's what in America. The two Wood's are the third and fifth past presidents of the AVMA. A second historical article is the inaugural address of Dr. Rush Shippen Huidekoper (Am. Vet. Rev., 8, (Dec., 1884): 377-396). "Medical Department of the U. S. Army in the World War" (1923) gives a fairly good account of the Veterinary Corps at that time. "History of the Bureau of Animal Industry" (1924), by Dr. U. G. Houck, is a historical masterpiece. "Veterinary Military History," 2 vol. (1935), by Drs. L. A. Merillat and D. M. Campbell, assembles a great deal of general veterinary history of the world. Coöperating in this were Drs. Clarence J. Marshall, Charles E. Cotton, W. J. Embree, Willard H. Wright, and Maurice C. Hall.

The School of Veterinary Medicine, University of Pennsylvania, Division of Veterinary Medicine, Iowa State College, the Eastern Iowa Veterinary Medical Association, the Ohio State Veterinary Medical Association, and the North Carolina Veterinary Medical Association have published valuable historical books. The appearance of these from time to time indicates that arousing interest in veterinary history is resultful, and ought to be continued.

President B. T. Simms has proposed that this committee collect material on the history of the livestock sanitary service of the 48 states and to enlarge the sum of biological knowledge already of record. The former is to be assembled during the next fiscal year, and ought to be ready to publish a year hence. The latter is an endless task that becomes increasingly difficult as time passes.

The Committee on History wants the rating of a Standing Committee for the reason that its work is everlasting and of growing importance. "Special" connotes temporary assignment to a passing project. To stabilize its undertakings, the tenure of membership might be set at six years with the usual annual appointment at expirations. In the large medical societies, "History" is given the status of a section.

s/L. A. MERILLAT, Chairman
J. M. ARBURUA G. H. GLOVER
C. E. COTTON JOHN R. MOHLER
L. VAN ES

Nomenclature of Diseases

The matter of a systematic and comprehensive plan for the classifying and listing of the diseases of animals continuued to occupy the attention of the Committee this past year. This is a very important matter and one which the Committee considers vital to the success of the undertaking.

The report of the Committee for the year 1946 (J.A.V.M.A., 109, 1946:427) contained an example of a system of cataloging that combines topographic and etiologic criteria as the basis for allocating the various diseases. It included a scheme for coding the different topographic and etiologic categories by using letters and decimal numbers to designate each. The Committee subscribes to the fundamental principles of cataloging that are embodied in the suggested plan but proposes to replace the letter and number system of coding with one that uses, for the most part, numbers only. The reason for this change is obvious if the proposals suggested below are adopted.

Since the system of classification which the Committee planned to follow was patterned after a system already in use in many hospitals and clinics for human beings and endorsed by the American Medical Association, it is proposed that the schema delineated in the "Standard Classified Nomenclature of Disease," a manual prepared for the cataloging of diseases of man, be adopted by the Committee as the standard for cataloging the diseases of animals. This means that the topographic and etiologic categories and the system of coding used in that manual will be followed precisely at every point where diseases, disorders, and disturbances of animal coincide with diseases, disorders, and disturbances of man. In this connection, the Committee recognizes that it will be necessary to modify and adopt the schema used for human diseases to fit the particular needs inherent for the animal diseases. This, we believe, can be accomplished satisfactorily.

The aforementioned proposal was discussed and endorsed in a meeting of the Committee which was held in Chicago last December. Its adoption, however, was contingent upon the approval of the American Medical Association or its Executive Council, who are the present sponsors of the "Standard Classified Nomenclature of Disease" and administer the affairs that pertain thereto. The chairman of the Committee was delegated to contact the proper officers of the American Medical Association and inform them of the functions of the Committee and of the proposal to adopt said standard as the basis for developing a similar catalog of the diseases of animals. The proposition was laid before Dr. Edwin P. Jordan, editor of the manual, and a very cordial reply was received wherein approval was fully granted with the provision that, should the AVMA adopt the "Standard Classified Nomenclature of Disease" as its rule and guide for developing a similar catalog of diseases of animals, then the American Medical Association should receive due credit and acknowledgment. We see no reason why this should not or would not be done.

Dr. Jordan suggested that before the Committee of the AVMA began with the task of assembling and listing, it might be advisable to postpone the work until after the publication of the third edition of their manual which was then going to press. In the opinion of the Committee, it seems wise to follow that suggestion. It is hoped that the publication will soon become available and that the job of listing can be undertaken without further delay.

s/H. C. H. KERNKAMP, Chairman
F. R. BEAUDETTE J. H. HELWIG
J. B. BECK I. A. MERCHANT
M. A. EMMERSON CARL OLSON
G. H. HART BENJ. SCHWARTZ
FRANK THORP

Food and Milk Hygiene

During the past year, this Committee has functioned as an advisory committee to those who have submitted inquiries regarding the establishment of meat inspection ordinances throughout the country. Numerous inquiries have been received, and the outline of a food inspection code (which was adopted by the Executive Board in Chicago in December, 1945, and which appeared in the January, 1946, issue of the Journal) was distributed to furnish the desired information.

The Committee is desirous of preparing model drawings of a small meat-packing establishment, which will include facilities for handling all species of meat producing animals, including poultry and the manufacturing of produce derived from such animals to supply local communities with standard specifications which they could adopt in the establishment of meat inspection organizations.

It is recommended that the special Committee on Food and Milk Hygiene be continued.

Respectfully submitted,

O. W. SEHER, Chairman
G. H. HOPSON E. M. LYNN
H. E. KINGMAN, JR. J. H. STEELE

Diseases of Food Producing Animals

In order to obtain information on the status of the disease situation among food producing animals in the United States and its territorial possessions, the individual members of the Committee directed inquiries to a large number of official and practicing veterinarians in their respective territories. A fairly representative sample of professional opinion, suggestions, and criticism was obtained, and we gratefully acknowledge the contributions from every branch of the profession.

Reports were also received from the General Headquarters, Supreme Commander for the Allied Powers, regarding the animal disease situation in the Pacific territorial possessions through the courtesy of Col. O. H. Dixon, V. C., and from the territorial veterinarian of Alaska, Dr. E. F. Graves. According to Colonel Dixon, Japan is host to about all of the world's animal diseases, and rinderpest is a constant threat from the Asiatic mainland.

One revealing feature is the utter lack of data regarding the morbidity of important animal diseases in some large livestock producing states in the U. S. A. Some system of reporting and tabulating the prevalence of animal diseases is badly needed to replace the speculative epizoötiology now prevailing.

In many states, there seems to be insufficient contact between the state sanitary officials, research groups, and practitioners.

CATTLE DISEASES

Brucellosis.—Brucellosis stands out as the most important disease in respect to prevalence, methods of control, and as a disease communicable to man. Several reporters stressed the great enthusiasm of cattle owners for Brucella vaccination but a lack of any enthusiasm or regard for sound principles of herd management and sanitation which, when combined with an intelligent vaccination program, would lead to complete suppression of brucellosis among food and milk producing animals. The entire states of Maine and New Hampshire are under supervision for control of brucellosis. A few states have a block of brucellosis-free counties, but in some instances they are having difficulty in holding the line.

Several foci of melitensis type of infection persist among goats in the southwestern states, with a considerable number of human infections in the respective localities. Colorado reported that the number of infected goats has been reduced from 11 to 2 per cent by the test and slaughter method.

There appears to be a steady increase of brucellosis in man as reported by health departments. The report of the Iowa State Department of Health shows 638 cases of brucellosis in 1946. During 1942-1945, inclusive, the highest morbidity was among packing-house employees, veterinarians, and male farm workers, respectively. Increased incidence among the families of dairymen or those in close contact with livestock was reported from Utah. The appearance of the porcine type in milk-borne outbreaks emphasizes the versatility of this type. The various state and national public health agencies recognize the importance of brucellosis and are preparing for a vigorous campaign. The veterinary profession is in the best position to lead any brucellosis campaign and attack the disease at its source.

Shipping Fever.—Regarded as the No. 1 disease of feeder cattle, shipping fever is probably closely linked to the pneumonia rate among cattle and hogs in packing centers. Pneumonia was the major cause for condemnation, being responsible for 18 per cent of the total condemnations, according to a recent report.

Little is known about the contributing causes, etiology, prevention, or treatment of shipping fever of cattle. The rôle of Pasteurella organisms is obscure and their etiologic importance is being questioned in many circles.

Prevention and treatment is empirical, even though some practitioners reported good results with Pasteurella antiserum and large doses of penicillin. The possibility of a latent virus infection in the respiratory tract of carriers suddenly becoming active incidental to transportation is worthy of investigation, but it will require a staff specially trained in the field of respiratory virus infections.

Calf Scours, Pneumonia.—The losses from the calf scour–pneumonia complex continue high among dairy calves and also among beef calves in some regions. Methods of management, housing, and feeding of young dairy calves on many farms are too often makeshift, in view of the fact that they are the future herd replacements. Feeding colostrum to hand-raised calves for several days, and more attention to the preparturient nutritional state of the cows, should receive consideration. More intensive and intelligent use could be made of the sulfa drugs in calf pneumonia, and all concerned would profit by reading the 1946 report of the Committee on Diseases of Dairy Cattle. The possibility of a primary virus etiology as reported by Dr. J. A. Baker should be investigated further.

Mastitis.—Mastitis continues to be one of the biggest disease problems in the dairy industry, not only from the standpoint of individual udder damage and losses in production but in the increase in bacterial counts of raw milk. Gangrenous staphylococcic mastitis was reported to be a rather serious matter in the Pacific Coast region.

In respect to treatment, the trend at this time seems to be in favor of penicillin. Regardless of the treatment used, the real burden of work falls on the dairyman to enforce sound methods of sanitation and herd management. The necessity for post-treatment bacteriologic examination of treated udders needs more emphasis in light of the fact that the effectiveness of any drug treatment used may vary from 40 to 85 per cent in individual cases. Naturally, the dairyman wants to salvage as many good producing cows as possible. Obviously, some failures to get any response to mastitis treatment in some herds is due to not eliminating the individual cows with udders damaged beyond redemption. The Udall method of classifying udder damage is a valuable, but too often neglected, method of eliminating the hopeless cases. A recent paper indicates that susceptibility to mastitis increases with age and even goes so far as to recommend discarding cows at the age of 6 years. This recommendation will need to be supported by further observations before it can be accepted by dairymen and many veterinarians.

Anaplasmosis.—Anaplasmosis of cattle is being reported in new territory every year and is fast becoming a disease of major importance. Increased morbidity was reported in some states in 1946, and the states now involved probably exceed 30.

The carrier state of recovered animals and the possibility of transmission by several arthropod vectors, as well as mechanical transmission by dehorning saws, surgical instruments, and bleeding needles, afford many opportunities for spreading this disease. Some severe outbreaks have been man-made. It therefore behooves every member of the profession in cattle practice to exercise extraordinary precautions lest he be accused of professional negligence.

At this time, there is an utter lack of effective

chemotherapy to destroy the carrier state, methods of detecting carriers, or safe immunizing agents. To date, *Anaplasma marginale* has not been cultivated artificially in the laboratory, nor is any other species of animal other than cattle uniformly susceptible. This makes any research extremely expensive. Research projects on anaplasmosis are being pursued at the Oklahoma, Maryland, California, Florida, Kansas, Louisiana, and Nevada agricultural experiment stations, with the probability of a revived project in Texas.

Foot-and-Mouth Disease.—The present outbreak of foot-and-mouth disease in Mexico should afford an opportunity for intensive research directed toward the development of immunizing agents. The problem is complicated by the plurality of foot-and-mouth disease virus and the carrier state of recovered animals. While no quarter should be given to this disease, the feasibility of creating buffer zones of immunized animals, provided a safe and effective method can be devised, is worthy of very serious consideration. With this nation as the food basket of the world, the enforced slaughter of a large meat-animal population to suppress disease is now a matter of serious worldwide concern.

Virus Dysentery.—A recently recognized, transmissible, virus dysentery or ulcerative stomatitis of cattle has been studied and described by Olafson and coworkers at Cornell University. There is no evidence that this disease has been previously observed or described in this country. It is an acute, febrile, contagious disease featured by leucopenia, salivation, nasal discharge, diarrhea, dehydration, and subsequent abortion in some pregnant cows. Ulcerative lesions appear on mucous membranes of the lips, cheeks, tongue, pharynx, and esophagus and cecum, along with diffuse reddening of the stomach and intestinal mucosa. Virus is present in the feces, blood, and spleen.

This disease appears to be highly infectious and subclinical types were observed, which subsequently were presumed to be responsible for explosive outbreaks in other animals in the affected herds. The mortality varied from 4 to 8 per cent.

Infectious Keratitis.—Infectious keratitis or conjunctivitis, often termed "pink eye," causes a large economic loss, particularly among young cattle during the summer months. In addition to loss of condition at a critical period of growth, permanent blindness often ensues in valuable breeding animals. Flies and other insects are believed to play an important rôle as vectors. Treatment is very unsatisfactory and almost prohibitive on a herd basis. Available biological agents are of questionable value in preventing this disease and generally regarded as of no value after the disease appears in a herd. While *Hemophilus bovis* has been proved the etiologic agent in some parts of the country, there is evidence that *Rickettsia* sp. also may be implicated in some outbreaks. Additional research is urgently needed on the rôle of the Rickettsiae or other infectious agents in this disease.

Every winter, cattlemen spend a great deal of money in an attempt to prevent and treat winter keratitis appearing in weanling calves and yearlings while on dry feed. It is the opinion of one member of the Committee that winter keratitis of cattle of this age is frequently a manifestation of vitamin A deficiency which often disappears rapidly following a change to hay or feed carrying appreciable amounts of vitamin A.

Bovine Leptospirosis.—First reported in this country by Jungherr in 1944, when he encountered 3 sporadic cases and demonstrated the Leptospira in the tissues of the infected cattle, it was later reported by Marsh. He found the Leptospira in sections of kidney after he had seen Jungherr's article and reëxamined some of his sections. Mathews reported exhaustively on a contagious disease of cattle associated with Leptospira in Texas. He questioned the causative rôle of the organism and described four forms of the disease. There is little question that the disease is more prevalent than suspected, and investigation, particularly as to strains of the organism, means of transmission, treatment, and prevention, should be instituted.

"Q" Fever.—An explosive outbreak of "Q" (rickettsial) fever, which occurred among stockyard and slaughter-plant employees in Amarillo, Texas, was described in a series of papers in the "Journal of the American Medical Association," March 22, 1947. This report should be read by all concerned. There were 55 cases and two deaths among 136 employees in three establishments.

Rickettsia brunetti was recovered from the serums of 2 patients, and the diagnosis of "Q" fever was confirmed by complement fixation tests on the serums of a group of cases.

It is presumed, although not confirmed, that infection arose from one lot of cattle which were handled in the yards and slaughter plants. It seems that this lot of cattle was infectious for yard employees and meat handlers, although the cattle themselves did not show any remarkable gross pathologic conditions during processing.

Another outbreak of "Q" fever occurred among 30 packing-house employees in Chicago in 1946.

The incubation period of "Q" fever in man varies from fourteen to twenty-six days, and it is not readily differentiated from the early stages of brucellosis, typhoid, and typhus. Prior to this Texas incident, there was some evidence that rickettsial infections may exist in animals.

Bacillary Hemoglobinuria.—Having been recognized in new areas of the Intermountain, Pacific Coast, and Gulf regions every year, its presence in an area in the middlewestern states is now suspected. It was diagnosed in eastern Washington in 1946. Recent work by Jasmin of Montana reveals that the sporulating anaërobe, *Clostridium hemolyticum*, associated with this disease will live in the bone marrow as long as two years.

Tuberculosis.—An increase in tuberculin reactor rate was reported from several states. Connecticut reported an increase in tuberculin-reacting cattle of Canadian origin.

Johne's Disease.—Appearing in the reports from several states, one reporter believed that this disease may be more prevalent in some regions than heretofore suspected.

Scabies.—Scabies of cattle is prevalent in several New England and western states. Some large range herds in Nevada, Oregon, and California are presently infested. It is estimated that a three-year campaign will be required to clean up some range herds.

The presently used warm lime sulphur method requires at least four dippings for scabies-infested cattle, with a heavy investment in vat equipment for large range herds; it often requires moving them 40 to 50 miles to dipping vats. It is an opportune time to try some of the new acaricidal and insecticidal agents adaptable to use in mobile, high pressure spray equipment under the guidance of competent authorities. Increased vigilance over cattle transported interstate or to and from livestock shows is needed.

The dermatophytoses of animals constitute a group of skin infections which are very difficult to treat. The communicability of some types to man is recognized. Dr. H. E. Kingman, Sr., calls attention to the danger of such cutaneous lesions being dismissed as ringworm only to be later recognized as scabies. Research by specially trained clinical mycologists is needed.

Local and Uncommon Diseases.—Among the localized or uncommon diseases were 18 confirmed cases of coccidioidal granuloma in cattle and 48 separate outbreaks of anthrax in California. Anthrax appeared in one new area in Missouri, in the northwest corner of Louisiana, and in the northeast corner of Texas in 1946. Dr. A. K. Carr of California reported that good results were obtained with

a single treatment of clinical cases of anthrax using 225 cc. of anthrax serum and 100,000 units of penicillin given simultaneously.

Considerable death loss among beef calves from the peracute form of white muscle disease was reported from Oregon. No cases were reported in western Nevada this year. This malady in calves appears to follow much the same pattern in respect to anatomic lesions as the similar disease in lambs which will be mentioned in a subsequent paragraph. The pulmonary edema and congestion peculiar to the peracute form in young calves may be mistaken for pneumonia. The hearts should be carefully examined for lesions of myocardial dystrophy.

Urinary calculi among feeder steers was more prevalent during the winter of 1946-47 in the Intermountain plains and southwestern states than for many years. A recent report suggests that diets low in phosphorus may favor the formation of urinary calculi in steers and sheep. The physiologic basis leading to their formation needs more investigation.

A clinical entity (provisionally called X disease), chronic in course and usually fatal, has been found scattered over many parts of Texas within the past two years. There is suggestive evidence that the same condition has been found in other states as well. While the outbreaks are more or less sporadic in nature, it is not uncommon for the majority of the animals in a herd (calves and adult cattle) to become infected. The disease is characterized by thickened skin (no absence of itching), proliferative growths on the tongue and buccal membranes, diarrhea, lacrimation without conjunctivitis, progressive anemia, and loss of weight and condition, the affected animals dying after several months. As a rule, the appetite remains good, and the animal shows little if any elevation of temperature. The disease resembles a generalization of a fungus infection of some sort, but the true cause, satisfactory treatment, means of transmission, and prevention remain unknown.

SWINE DISEASES

Enteric Infections.—Enteric diseases of swine and severe death losses among suckling pigs farrowed in the spring of 1947 were prominent features in swine disease reports.

Some presently unidentified enteric infection, suspected to be of a virus nature, caused alarming losses among suckling pigs in Ohio, Indiana, Illinois and, to a lesser extent, in other hog producing states. While older animals and shotes were simultaneously affected, the death loss so far reported has been absent or extremely low. One report indicated that the disease might be spread by contact with human beings.

Appeal was made for a more thorough understanding of the infections and contributing factors now grouped under the swine dysentery complex and for more effective and specific methods of prevention and control.

Dr. L. P. Doyle, one of the eminent authorities on swine dysentery, stated, "It is becoming more prevalent, spreads to new territories each year, and tends to persist on farms to which it is brought." Such a situation suggests the possibility of heterologous reservoirs of infection or immune carriers among swine.

Brucellosis in Swine.—Brucellosis continues to be a very important swine disease, not only from the standpoint of the disease in swine but also as an occupational disease of packing-house and farm personnel. The recent outbreak of brucellosis in man traced to *Brucella suis* in a milk supply emphasizes the versatility of this type.

Recent investigations indicate that brucellosis of swine can be controlled and eradicated. According to Hutchings and others, the blood test is useful only as an index of herd infection. When infection is disclosed, the entire unit must be considered as infected. Removal of pigs from infected sows at weaning time, complete segregation of reactor pigs from clean ones, retesting the breeding stock at time of service, and mating only negative animals has been a successful method of raising a clean herd.

Vesicular Exanthema.—The very close resemblance of vesicular exanthema of swine to foot-and-mouth disease and the presence of the latter disease in Mexico calls for extreme vigilance and experienced diagnostic assistance whenever vesicular exanthema appears. This disease has appeared rather frequently in California since 1932.

Hog Cholera.—On critical analysis, very little, if any, progress has been made toward eradication or suppression of hog cholera, in spite of the fact that the use of serum and virus continues at a high level. Quoting from a letter received from a prominent member of this association, who has a large swine practice: "Our present methods of controlling hog cholera are far outdated and should be discarded. Hog cholera has become less epizoötic, but its prevalence has not materially decreased. Vaccination has not lessened the toll exacted from the swine industry. It serves to protect the individual hog but, at the same time, may create a focus of infection in the neighborhood, thus perpetuating the disease. The nonvirulent vaccines on the market leave much to be desired. We need a new, effective vaccine that does not spread the disease and will produce a solid immunity.

"What we need is intensive research on hog cholera with the thought in mind of eradicating the disease." More rigid control over the distribution, sale, and use of hog-cholera virus is badly needed.

The recent announcement of the artificial cultivation of hog-cholera virus in the laboratory by Dr. W. H. Boynton and associates is the first major development since the work of Dorset and Niles nearly forty years ago. Several million dollars have been appropriated to keep foot-and-mouth disease out of the United States. We might well afford to spend a like sum to eradicate hog cholera in this country. With the rapid turnover in hog population, we might do it in five years with proper organization.

Swine Erysipelas.—Swine erysipelas, although not as widely and universally spread throughout the country as hog cholera, has been diagnosed at some time, and in some form, in nearly all of the 48 states. The greatest prevalence is in the Cornbelt and areas containing large numbers of swine.

It is quite evident that the mortality loss economically does not come near to the economic loss from morbidity. The insidiousness of this disease easily lends itself to this large economic loss. In many instances, outside of the areas containing the greatest incidence of the acute form, it is not recognized as a specific infection or a preventable one. In many instances also the low-grade erysipelas infection is considered a result of faulty nutrition or just plain starvation, or possible mineral deficiencies with enlarged joints.

All forms of the disease are being controlled satisfactorily where living culture and serum are used on each successive crop of pigs over a period of a few years. At present, there are 15 states coöperating with the U.S.BAI in the experimental control of this disease by simultaneous vaccination with culture and swine erysipelas antiserum.

Tuberculosis.—Tuberculosis caused 9 per cent of the hog-carcass condemnations at slaughter plants last year. Infection is believed to be mainly from avian sources. The avian tuberculosis rate is still high in several states and in one is sufficiently serious to warrant the employment of a veterinarian for fulltime work on avian and swine tuberculosis.

SHEEP DISEASES

Very few veterinarians are engaged with sheep diseases, but losses from various causes are known to be heavy in some localities.

Infectious Keratitis.—This disease is a serious

problem in some of the western range regions. Too little is known about the etiology, and treatment is generally both unsatisfactory and relatively expensive.

Ovobalanitis.—Causing severe damage among rams and rendering many entirely worthless for breeding purposes, Tunnicliff of Montana demonstrated ovobalanitis to be of a virus nature, but to date no method of immunization has been announced. Severe vaginitis with edema and vesicular eruptions on the vulva may occur among the ewes concurrently with ovobalanitis among the rams at breeding time, with marked reduction in the lamb crop.

Foot Rot.—The cause, treatment, and prevention of foot rot among farm flocks and range bands of sheep needs to be investigated. The rôle of *Actinomyces necrophorus* is still in question. The intravenous use of sulfapyridine, in view of the excellent results obtained in treating foot rot in cattle, must be investigated.

Enterotoxemia.—Overeating of feeder lambs continues to cause considerable losses, and the underlying causes and physiologic factors are not well understood. Dr. A. W. Deem of Colorado reported that the use of 1 per cent of sulphur in the grain ration of experimental and commercial feedlot lambs has given excellent results in preventing enterotoxemia.

Listerellosis.—Increased incidence of listerellosis among feeder lambs was reported from Colorado and two other middlewestern states. This disease was also diagnosed in feedlot cattle.

"Stiff Lamb Disease".—This continues to be a problem in many sheep raising districts. Strictly speaking, the term "stiff lambs" is a collective one actually embracing several disease entities with distinct etiologies, most of which need further investigation.

Stiffness and deformity may be the manifestation of arthritis caused by *Corynebacterium pyogenes, Erysipelothrix rhusopathiae,* or other microbic infections involving one or more of the leg joints, and may afflict lambs of any age, but particularly feeder lambs. White muscle disease, affecting lambs from 1 to 6 weeks of age, is now believed to be associated with vitamin E deficiency in the diet of the ewes, according to recent work of Cornell investigators.

Lamb Dysentery.—Often a problem wherever early shed lambing is practiced, proper construction of such lambing quarters, so as to permit rigorous cleaning and disinfection, is very important.

An increase in lamb dysentery was reported among shed-dropped lambs in Wyoming, but favorable results were reported by using sulfamerazine as a preventive and curative agent. Dr. O. H. Muth of Oregon reported that enterotoxemia or pulpy kidney disease, usually affecting lambs 2 weeks to 1 month of age and, occasionally, older lambs on pasture, is being successfully controlled by type D *Clostridium welchii* toxoid and antiserum.

Pregnancy Disease.—This disease of ewes, still partially unexplained, is of economic importance in both range and farm flocks. It may occur among ewes confined in pens with a high food intake, and it may also occur in range bands following two or three days of semi-starvation and exposure to severe storms and cold weather. The rôle of carbohydrate intake during gestation needs more investigation. It has been observed that the incidence of pregnancy disease was greatly increased among ewes with livers badly damaged by liver fluke infestation.

Mineral Requirements.—More factual information is needed regarding the mineral requirements of sheep and goats, especially range animals. Too little is known about this subject, and too many unwarranted claims are being made by some mineral mixture manufacturers.

ANIMAL NUTRITION

A large amount of information is accumulating on the nutritional requirements of food producing animals. Dr. L. A. Maynard of Cornell University is to be commended on his excellent work in assembling this information in textbook form. Considerable information on the clinical and pathologic manifestations of nutritional deficiencies is also accumulating, and veterinarians should be well informed on such matters. Very often, the diagnosis of some nutritional diseases is dependent on laboratory methods. Most agricultural experiment stations and some animal pathology laboratories have the proper facilities, and they could be used to better advantage than heretofore.

Nutritional deficiencies in soils and forage may vary widely according to the locality. They are often directly reflected in the animal population. The nature of such deficiencies, when suspected, should be determined in order to intelligently and economically treat and prevent them.

Practical methods of providing essential minerals for cattle and sheep where needed on the ranges of the western states need to be revised. Tests designed to evaluate the best means of mineral supplementation,—as a lick, by fertilization of pastures with essential minerals, or by their addition to the drinking water of the ration,—constitute an urgent need.

PARASITES

We are cognizant of trespassing upon the domain of the Committee on Parasitology, but several matters warrant some comment.

Continued search for efficient anthelmintics for the control of the small, gastrointestinal roundworms of sheep and goats is needed. Phenothiazine is extremely efficient against the greater stomach worm, *Haemonchus contortus,* and the nodular worm, *Oesophagostomum columbianum,* but leaves much to be desired in its action against the smaller strongyles. The phenothiazine-salt mixture (1 : 9) is effective in preventing roundworm egg hatching, and extensive trials, especially in the regions of heavy rainfall and lush ground vegetation, should be conducted to determine the place of this mixture in the roundworm control program.

The fringed tapeworm, *Thysanosoma actinioides,* still remains a mystery in regard to life cycle; until this is known, we can have no satisfactory means of control. At present, we have no drug of any practical value for ridding the sheep or goat of this parasite. The condemnation of infested livers by the packers makes this parasite an important economic problem.

The liver fluke problem is beginning to cost the sheep and cattlemen plenty of money in localities where the flukes are prevalent. The principal complaint from the cattlemen is the dockage at packing plants resulting from liver condemnations, which may run as high as 70 per cent in some instances. Severe death losses among sheep due to overwhelming infestation with flukes and concurrent liver damage is becoming increasingly prevalent.

Even though hexachlorethane is quite effective for killing mature flukes, we lack a safe and effective drug treatment for arresting the immature fluke during his migration through the liver.

Vaccination with *Clostridium novyi* toxoid may control black disease in sheep, but the fundamental issue is fluke control. The essential point in control is the destruction of the intermediate snail host. Fluke-control programs have not been pushed or properly organized where this parasite constitutes a problem. While the copper sulfate method is extensively used, there still appear to be some points in the snail-control problem that need further consideration and study. The coöperation of all sheep and cattlemen in a fluke-infested locality or community is required lest drainage or irrigation

water from fluke-infested pastures nullify the community effort.

Both stomach worm and lungworm infestations among sheep and cattle under range and semi-range conditions are being found at an increasing rate in the Intermountain and Pacific Coast regions. Stomach worms are causing considerable damage among fall-weaned beef calves during the first winter. In some herds, such parasitism is further complicated with such deficiencies as vitamin A, phosphorus, and calcium.

Coccidiosis is a major internal parasitic problem in connection with feeder lambs and, occasionally, with calves and feeder cattle. Investigation of the efficacy of the slowly absorbed sulfonamides on intestinal coccidia has been suggested. Some very fine work has been done by the staff at Colorado State College on coccidiosis of feeder lambs, but more investigation is needed to develop more effective methods of prevention and treatment.

AGENTS POISONOUS TO LIVESTOCK

A large number of plants are known to be poisonous to livestock, and perhaps the greatest number of plant poisonings of livestock occur west of the Mississippi River. In some instances, the toxic principles are well known but, in many others, little or nothing is known regarding the toxic principles and pharmacologic action. In only a very few instances are any antidotes known. The pharmacology of poisonous range plants and search for antidotes presents almost a virgin field.

Molybdenum poisoning of cattle characterized by intense diarrhea, emaciation and change of coat color, and anemia was recently reported from California. Investigation is still in progress regarding some of the contributory aspects of this problem.

Serious losses among cattle and sheep due to poisoning by nematode-infested fescue seed screenings (*Festuca rubra commutata*) occurred in the Willamette Valley counties in central Oregon. Investigation is still in progress.

CONCLUSIONS

1) We need not only fundamental investigation of many animal disease problems, but improvement and better utilization of known methods of prevention and treatment of many others.

2) In addition to the need for more research workers, we should have a large coöperating group in the field to adapt the results of research to practical use.

3) A closer working contact should be established between official veterinarians, practitioners, and research workers.

4) More accurate information should be available regarding animal disease morbidity.

s/L. R. VAWTER, Chairman
I. B. BOUGHTON H. E. KINGMAN, JR.
FRANK BREED R. N. SHAW

Diseases of Wild and Furbearing Animals

At the present time, when foot-and-mouth disease is present in Mexico, it is timely to consider the rôle wild animals may play as disseminators and what steps should be taken should the disease appear in the United States. It is the responsibility of the veterinary profession to be ready to give just and well-founded recommendations for dealing with wildlife should the disease spread to this country. Stock owners on the one hand, and conservationists and sportsmen on the other, are bound to oppose each other on procedures for dealing with deer in and around infected areas. The true relationship between deer and cattle in regard to foot-and-mouth disease has not been adequately studied in this country, largely due to lack of opportunity.

Some 22,000 deer were slaughtered during the 1924 California epizoötic, 10 per cent of which were reported to show lesions. The present Mexican outbreak affords an excellent opportunity to gather scientific data on the susceptibility of wild animals and their rôle in foot-and-mouth disease. Evidence obtained from Scandinavian and German literature would indicate that deer play only a minor rôle in disseminating foot-and-mouth disease. Rumors of deer and other game having foot-and-mouth disease are plentiful, but there are only a very few authentic records on hand in spite of the fact that intensive studies have been made. Records of infection in deer, wild boar, moose, and antelope do exist, but they are rare and insignificant. On a private estate in Germany, 206 heifers, together with 60 fallow deer, were ranging on an area of some 125 acres, surrounded by a wall. All the cows became infected but not one deer. The Yosemite Park in California, where so many deer became infected, is considered by some to be a highly artificial area overcrowded with deer and not to be compared with a normal, open game range. More research on this is, undoubtedly, required to give us the proper answer.

Since 1944, fowl cholera has caused severe annual losses among wild waterfowl in northern Texas. This, undoubtedly, is a poultry-waterfowl relationship, the eradication of which deserves further study. The disease seems to be spread by infected poultry. Sanitary practices are apparently not well developed in that area, as evidenced by dead chickens being dumped along the roadside and in streams, instead of being buried.

Mange has been reported, since 1944, in foxes and other wild species in some of the New England states. While this condition probably is not a threat to domestic stock, it should be under veterinary supervision.

These three examples (foot-and-mouth disease, fowl cholera, and mange) serve in a small way to point out the importance and need for more veterinary activity in the field of diseases of wildlife.

The Committee recommends that the AVMA:

1) Use its influence to stimulate activity in research in wild animals diseases;

2) Urge the Bureau of Animal Industry, in the present outbreak of foot-and-mouth disease in Mexico, to thoroughly study the susceptibility of deer and other wild species to the disease and their relationship to domestic stock.

s/LEONARD J. GOSS, Chairman
E. R. QUORTRUP J. E. SHILLINGER

Diseases of Small Animals

This Committee was appointed to activate the recommendations of last year's committee. To this end, the Committee has assembled information on the control of parasites in dogs and household pets, and is engaged in compiling this information in the form of an illustrated booklet for distribution to interested laymen—kennel owners, pet shop operators, and clients of veterinarians.

The Committee requests that it be continued in order to complete the work which it has in progress.

WAYNE H. RISER, Chairman
DUANE L. CADY C. E. DECAMP
S. E. PHILIPS K. W. SMITH

Motion Picture Library

The availability of motion picture film has allowed the production of several excellent educational films. As these completed films were

released, copies were procured for the Motion Picture Library. They are as follows:

Bovine Surgery.—E. R. Frank, Kansas State College, Manhattan.

Administration of Drugs to Sheep.— J. H. Whitlock, Cornell University, Ithaca, N. Y.

Newcastle Disease.—P. P. Levine, Cornell University, Ithaca, N. Y.

Swine Brucellosis.—L. M. Hutchings, Purdue University, Lafayette, Ind.

The present list of films will be revised to include the newly acquired films, bringing the total to 14 illustrative and educational films available from the Motion Picture Library of the AVMA.

The number of requests for films has increased each year since the beginning of the film library. The use of motion pictures in visual education is well established and their value well known. As the scope and number of films available through the Motion Picture Library increases, there will be an even greater demand.

The requests for each of the listed films last year were as follows:

6 Surgery of the Bovine Eye.—Dr. James Farquharson, Colorado A. & M. College.
4 Pullorum Disease Control. — California State Department of Agriculture.
2 Control of Bovine Tuberculosis in California. — California State Department of Agriculture.
4 From Range to Range.—A Story of California State Meat Inspection—California State Department of Agriculture.
2 Meats With Approval.—U. S. Department of Agriculture.
6 Avian Pneumoencephalitis. — California State Department of Agriculture.
1 Vesicular Stomatitis of Swine.—California State Department of Agriculture.
6 Gastric Fistula Technique and the Interior of the Bovine Stomach.—Dr. A. F. Schalk and associates, The Ohio State University, Columbus.
5 Skeletal Fixation by the Stader Splint.—Fractures of the Tibia. A Navy training film prepared for the Bureau of Medicine and Surgery, U. S. Navy, by the Bureau of Aeronautics.
2 Skeletal Fixation by the Stader Splint.—Fractures of the Os Calcis. A Navy Training Film prepared for the Bureau of Medicine and Surgery, U. S. Navy, by the Bureau of Aeronautics.

The Committee has been purchasing copies of completed silent films, due to the prohibitive cost of establishing sound tracks on existing films. It is anticipated that there will be a greater number of educational films produced during the year, and the Committee should be in a position to purchase these films without delay.

It is recommended that the Committee be continued and that sufficient funds be appropriated for the purchase of completed films, either silent or sound.

s/J. R. DINSMORE, Chairman
A. G. BOYD J. D. GADD
A. G. DANKS C. B. KRONE

Veterinary Service (Formerly "Postwar Planning Committee")

AGE EFFECTS

In reports given earlier by the Committee, attention has been called to the high percentage of the veterinary population in the age group above 50 years. It was estimated that this age group would number over 50 per cent of the veterinarians living in our country in 1949. The percentage compares very unfavorably with the average general population groups as given by the "United States News" for Feb. 7, 1947. There it is shown that the age group above 50 years presently composes but about 22 per cent of the population. It is evident that several years will elapse before the members of our profession will, in age distribution, parallel that for the general population of the United States; even by 1975, the estimate for the United States shows that this older-age group will average then only better than 28 per cent of the total population. For those contemplating a complete veterinary service, this age trend of the general population poses a question for a profession in which such a high percentage at present is in the later age brackets.

THE PRACTISING VETERINARIAN AND CONTROL OF ANIMAL DISEASES

One of the very important projects which the Committee undertook at its inception was the participation of the practising veterinarian in mass animal disease control measures such as the testing of cattle for tuberculosis and brucellosis. At that time, this was the source of much contention and ill-feeling between veterinarians of the regulatory forces who were privileged to test and those in private practice who were not accorded that source of remuneration.

At this time, we are pleased to report that all of the states within the Cornbelt and many others have, through appropriate legislation, established funds from which all veterinarians may be paid. This has not only alleviated the cause of unfriendly relations but has made the animal disease control work more effective. As time goes on, we anticipate that all states will provide for the participation of their practising veterinarians in the undertakings we have mentioned, and also will bring other animal diseases under control on a large basis.

DRUG STORE DIAGNOSIS AND SALESMANSHIP

The veterinarian has great opportunity, by participating in community activities and by utilizing his every contact, to place before the public what should be known about his profession. In the days which have recently passed, there has been great activity on the part of certain drug vendors to increase sales of veterinary items to livestock owners. Very definite and extensive steps are afoot to extend this project.

In the Merck Report for April, 1947, there is an item covering a meeting of the Proprietary Association of America. Much stress, according to this report, was placed on the need for training in animal-health pharmacy. United States drug stores were said to have sold in 1945 a total of $29 million worth of animal-health products.

Much of this volume of sales may have been in the past due to lack of knowledge of what the veterinarian has been trained to do. All too frequently, individual dislikes or preferences have operated as deterrents in the failure to accept work which rightfully should be considered part of the veterinarian's job. This failure to make our acceptance of work a comprehensive type of service has given excuse for prospective clients to go to salesmen of products which are recommended because of statements on the labels. As a profession, veterinarians cannot escape the responsibility of providing a complete veterinary service. This gives to the public expert professional service with rational prescription of treatment based upon an unquestioned diagnosis which veterinarians are prepared to give.

INTERNSHIP

It has generally been recognized that the practice of internship followed in human medicine should be

employed in veterinary medicine. Your committee explored several lines of approach to this important subject. It was finally determined, however, to suggest to the secretaries of the state veterinary examining boards of the several states that they fix a future date, beyond which no veterinarian should practice independently in that state, until he could show he had at least one year of experience as an intern.

This suggestion is meeting with the approbation of numerous examining boards, and we have heard no serious objection to this procedure from any source.

CLOSER CORRELATION OF VETERINARY ACTIVITIES

In order to unite more effectively various veterinary activities, the Committee planned a letter which asked for a closer correlation of the three great branches of veterinary disease control within the state, namely: (1) service as related to the office of the state veterinarian, (2) service as related to the work of the experiment station veterinarian, and (3) service as related to the practitioner. Copies of the letter were sent to the state veterinarians, to the experiment station veterinarians, and to the secretaries of the state associations.

THE VETERINARIAN IN PUBLIC HEALTH WORK

The Committee is cognizant of the great possibilities of a veterinary public health service. The Committee has felt that the attention of educators should be especially called to the opportunities and needs in this field.

It would seem opportune that members of our various veterinary associations should be provided with material which would give them a knowledge of the scope of this type of work, in order that they may act as advisors of movements for the instigation of this type of service in their communities. The attention of county and state health departments should be called to the rôle the veterinarian can play in the control of communicable diseases and in the supervision of the preparation of food products of animal origin. At present, considerable difficulty would be experienced in securing many veterinarians for this type of work. However, as time goes on and with the establishment of new veterinary colleges, more trained men will become available.

GOALS

In order to arouse greater interest on the part of the individual veterinarian concerning his responsibility and opportunity in public health programs, whether it be in disease control or in the preparation of food products of animal origin, the Committee feels that a special effort should be made to bring information definitely before each member of our profession. It was thought that a booklet, presenting in an attractive manner the salient facts, the needs, the opportunities, and the suitableness of the veterinarians' training for this type of work, might possibly, were it to be widely distributed to the members of our profession, create in them the desire to make our goal a complete service and to assume the responsibility of being sure that our complete veterinary service includes this field of public health.

PARTICIPATION OF PRACTISING VETERINARIANS IN THE CONTROL OF INFECTIOUS DISEASES

In a letter to state veterinarians and secretaries of the state associations, the Committee suggested that information be secured with regard to the presence of animal diseases which could and should be suppressed. The letter further suggested that efforts be made to obtain appropriations by state legislatures to control such diseases. The thought was that, with the approach of the leveling off in economic values, this fund could be utilized by practising veterinarians and all others in suppressing the diseases.

PROFESSIONALISM

The Committee has addressed a letter to the various publishers of veterinary periodicals. Editors have consistently allotted space for the directing of our thoughts to what our profession means. The Committee had in mind a possible implementation of this effort by a more concerted attempt to hold ourselves up in front of a mirror, as it were, for the development of a unity of thinking of ourselves as members of a great profession.

DISTRIBUTION

As soon as there is an evident increase in the number of veterinarians being graduated, then will there be need for a good understanding of what factors determine how many veterinarians in various fields a community may support.

The studies being made on incidence and mortality from disease in Iowa may contribute valuable data.

Information on age of veterinarians, numbers of livestock, types of veterinary service, income, the volume and value of retail business, and the standard of living should be available for all communities of our country in the near future.

CHANGING SCENES IN AGRICULTURE

In the "Agricultural Situation" (vol. 31, Jan., 1947), Greenshields of the U.S. BAI, under the heading "Farms Are Getting Larger and Fewer," presents data covering the changes in farm size in various parts of the country. Based on a 1945 census, "The average farm for the country as a whole is now 50 acres larger than twenty-five years ago, 20 acres larger than five years ago."

It is significantly pointed out further by Greenshields that, "Today over half of the farm land in the country is in farms of over 500 acres, compared to only a third in 1920, and farms over 1,000 acres now account for 40 per cent of the farm land compared with less than a fourth twenty-five years ago. Considering that the 1945 census reports 1.1 billion acres in farms, 40 per cent of it—or close to 460,000,000 acres—is a good chunk of land to be in units of over 1,000 acres. Outside the 11 western states there are 200,000,000 acres in these large units."

A graph taken from this report of Greenshields shows the distribution and trend.

In the March 9, 1947, issue of the "Des Moines Sunday Register," editorially this problem is considered as it may affect community life. There is reported a study made by Goldschmidt of the University of California at Los Angeles. This study was made under the auspices of a special committee of the U.S. Senate on small business. Two communities in the San Joaquin Valley in California were compared: Dinuba community comprised 722 farms averaging 77 acres and Arvin, a community of 133 farms, averaging 497 acres.

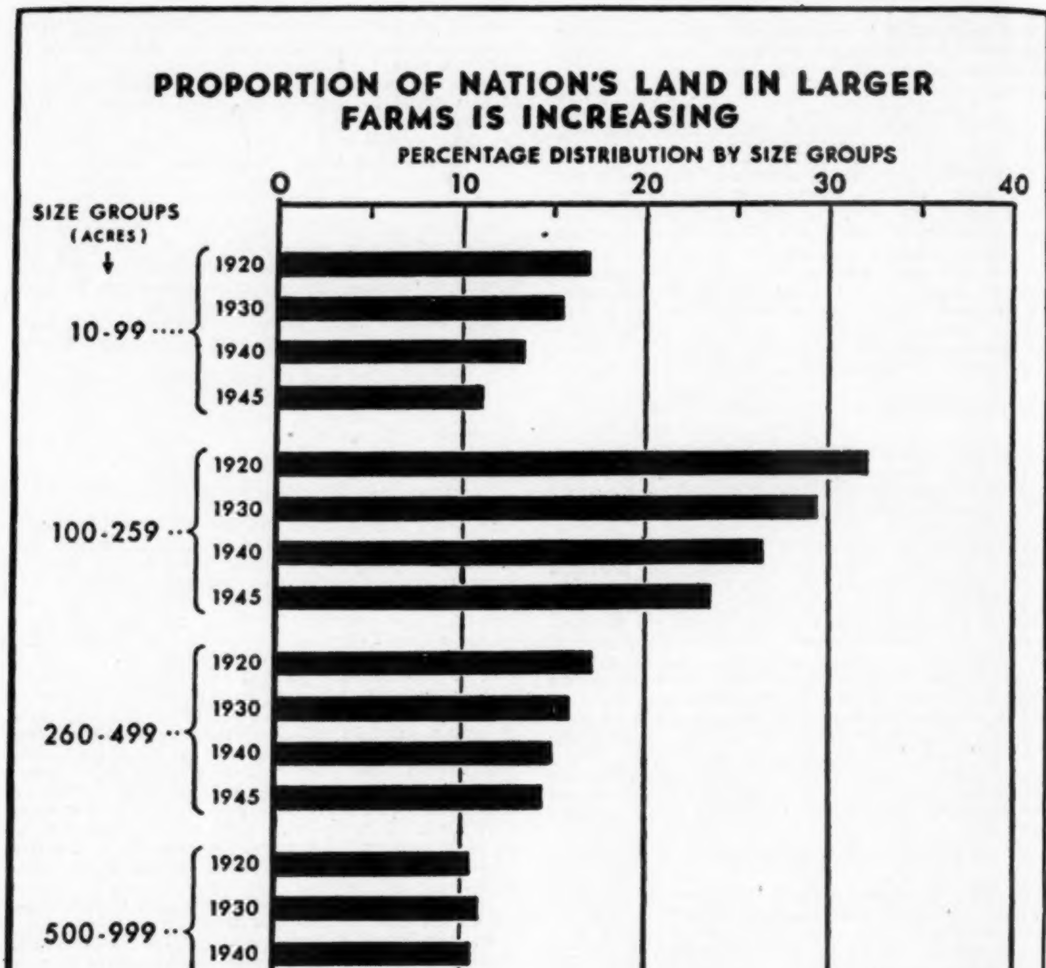
These significant statements were quoted from the report by the editorial writer: "The small-farm community is a population of middle-class persons with a high degree of stability of income and tenure, and a strong economic and social interest in the community.

"Where farms are large, on the other hand, the population consists of relatively few persons with economic stability, and of large numbers whose only tie with the community is their uncertain and relatively low income job. Differences of wealth are great among the members of this community, and social contacts between them are rare . . . .

"Even the operators of some of the large scale farms frequently are absentees; and if they do not live in Arvin, they as often seek their recreation in the nearby city. Their interest in the social life of the community is hardly greater than that of the laborer . . . .

"Attitudes such as these are not conducive to stability and the rich kind of community life which is properly associated with the traditional family farm."

This trend toward larger farm units as it may affect livestock numbers and community life is of



LAND IN FARMS UNDER 10 ACRES IS INSIGNIFICANT THOUGH THEIR NUMBER DOUBLED IN PAST 25 YEARS
DATA FROM BUREAU OF THE CENSUS

great concern to the progress of veterinary medicine. The general practitioner has been a vital part of community life. Will this "changing scene" affect distribution and need for veterinary service?

EXTENSION OF USEFULNESS

There is opportunity for development of certain types of coöperative projects in the eradication and control of certain diseases in which all veterinarians may well participate.

TABLE 1—Mastitis Control—San Pasqual Breeders Association

	August 1945			September 1946					
Herd no.	No. cows in herd	% clean	% infected	No. cows in herd	% clean	% infected	Total no. tests	Total vials* penicillin	Total costs material
1	193	47.5	52.5	188	97.3	2.7	1,273	548	$ 354.76
2	83	60.3	39.7	81	96.3	3.7	494	109	94.72
3	127	59.1	40.9	126	100.0	0.0	1,068	141	120.99
4	88	88.7	11.3	91	98.9	1.1	599	23	19.53
5	300	Apr. 1946 94.9	5.1	350	97.7	2.3	1,167	120	94.20
6	400	40.9	59.1	386	94.6	5.2	2,515	1,109	$1,040.95

*100,000 Oxford units.

In the state of Iowa, poultry clinics have been sponsored by civic organizations. Veterinarians of the U.S. BAI, county agricultural agents, Smith-Hughes people, local veterinarians, and many others have shared in such projects. Most excellent results have accrued from such activities.

In the state of California, projects in the control of mastitis in cattle have been set up in which the extension veterinarian, the county agricultural agent, the dairyman, and the local practising veterinarian have all participated with most admirable results. The table below illustrates very significantly what may be accomplished by such a coöperative effort in a relatively short period of time.

These are but two examples of an approach to a furtherance of veterinary usefulness.

An outline for the establishment of a project for the control of chronic mastitis of dairy cattle caused by *Streptococcus agalactiae* is in press for publication in the JOURNAL of the AVMA.

An example of what has been accomplished in the control of *Str. agalactiae* type of mastitis, through the use of Hotis test and microscopic studies under the sponsorship of a dairymen's organization, is shown in table 1.

RECOMMENDATIONS

1) Study marginal and submarginal areas and areas which are not accustomed to veterinary service with a view to making suggestions as to possible workable methods for supplying veterinary service to such regions.

2) Gather information covering all communities in the United States and Canada, covering:

a) Numbers and classes of livestock including poultry and pet animals;
b) Volume and value of retail trade;
c) Standard of living;
d) Numbers and age of veterinarians;
e) Type of work being done by veterinarians;
f) Common diseases of animals.

3) Study further the possibilities of internship.

4) Bring before state and county health officers the importance of the veterinarian in public health work, and urge establishment of plans for employment of veterinarians as funds and men become available.

5) Attempt to stimulate the formation of more local veterinary organizations as a means of developing a higher common interest in our profession.

6) Study the possibilities and advisability of coöperative projects with organizations, such as livestock associations, farm bureaus, etc.

7) Attempt to develop in the minds of veterinarians that poultry is a class of livestock.

8) There is need for knowledge by veterinarians concerning the over-all picture of procedures and practices followed by breeding associations. A survey should therefore be made and the assembled data made available to all members of the Association.

9) The Committee recommends its continuation to work on the recommendations listed above and to pursue suggestions made by the administrative officers of the Association.

s/H. L. FOUST, Chairman
J. A. BARGER M. G. FINCHER
COL. SETH C. DILDINE E. A. GRIST
K. G. McKAY

National Board of Veterinary Examiners

The report of the Committee for this year is in the nature of a progress report, since we are not yet ready to submit a completed plan for a National Board of Veterinary Examiners. A meeting was held on March 7, 1947, with all members in attendance. Following a full day's deliberation your committee was unanimously agreed that more time was needed and final action relative to a National Board should not be taken before our meeting in 1948. It was proposed that, in our report to the House of Representatives, a brief resumé of our deliberations be presented, and that the chairman of the Committee appear on the program before the General Assembly to explain the functions and operations of a National Board of Examiners, so that a larger segment of our membership would be fully informed on the subject before final action is taken. It is hoped that a detailed plan of operation for such a board will be ready and published sufficiently early in the year so that our entire membership will have ample time to study it before the next annual meeting.

In discussing the value of a National Board of Veterinary Examiners to our profession, it was pointed out that such a board should raise the standards of veterinary education and bring about more uniformity in our veterinary curriculums. It should serve as a stimulus to instructors to see that their students are properly prepared to make a creditable showing in the subjects for which they are responsible. It would serve as a barometer of medical education, in that each school may have the results of the examinations given its students to compare with student's results in those of other

schools. Likewise, the prestige of holding a certificate from a National Board of Examiners should encourage scholarship among our veterinary students.

The establishment of a national board would also tend to elevate the standards of examinations as now practiced in some states. It is hoped that a national board certificate will carry with it sufficient prestige so that further examination for those desiring to enter the Veterinary Corps, United States Public Health Service, Bureau of Animal Industry, etc., will not be necessary.

Undoubtedly, many other benefits to our profession would eventually evolve from the establishment of a National Board of Veterinary Examiners.

MEMBERSHIP OF THE BOARD

The membership of a board of this kind should have representation from as many segments of our profession as possible. After thorough discussion, it was decided to recommend a board consisting of thirty members as follows:

Council on Education	2 members
State Veterinary Examining Boards	5 members
Veterinary colleges	5 members
Research workers	1 member
Bureau of Animal Industry (the chief or his designated representative)	1 member
United States Army Veterinary Corps	1 member
Veterinary Division of the United States Public Health Service	1 member
American Veterinary Medical Association (the president and executive secretary)	2 members
Practitioners	6 members
Organization of livestock sanitarians (state veterinarian)	1 member
Elected by the National Board from the membership at large	5 members
Total	30 members

The five members to be selected by the National Board need not all be veterinarians. Some nonveterinarians of professorial rank, who are teaching in veterinary colleges, may be selected.

Your committee is of the opinion that the tenure of office of board members should be for five years and that no elected members should serve for more than two successive terms. Each group would be expected to select its own representatives for membership on the Board.

EXAMINATION

It was quite generally agreed that the examination would be divided into three parts:

Part I would be given at the conclusion of the second year of professional education and would cover the fundamental medical sciences.

a) Anatomy (gross, microscopic, and embryology)
b) Physiology
c) Physiological Chemistry
d) General Pathology
e) General Bacteriology
f) Pharmacology and Materia Medica
g) Zoötechnics

Part II would consist of examinations in the following subjects:

a) Medicine
b) Surgery
c) Obstetrics
d) Meat and Dairy Hygiene
e) Parasitology
f) Special Pathology
g) Medical Jurisprudence

Part III would consist of a clinical and practical examination to determine the student's adaptability and ability to perform the tasks expected of a veterinarian.

The details of the conduct of the examination and the cost of such examinations are details which will be worked out by the Board once it is duly organized.

This report of our deliberations thus far is reported for the purpose of inviting criticisms and suggestions for consideration at some future meeting of the Committee. Organizing a national board is no small task, and your committee welcomes any ideas which the membership may have to offer.

s/WALTER R. KRILL, Chairman
C. W. BOWER R. A. KELSER
W. L. BOYD I. D. WILSON
R. R. DYKSTRA

Enforcement of Code of Ethics

Your committee was given the title "Special Committee on Enforcement of the Code of Ethics."

It is not the wish of the Committee to place hardships on any member of the AVMA by an immediate enforcement program, but to progress carefully and acquire the coöperation of the constituent organizations.

We believe that the flagrant violation of the Code of Ethics, particularly in the field of advertising, is a shame and disgrace and places the profession in the category of the plumber, the electrician, or the heating man. The present status of the profession in this regard is no doubt due largely to the "do nothing attitude" of the AVMA as well as the state and local associations.

An aggressive and militant campaign by the AVMA to impress upon the component associations the importance of a uniform code of ethics, and the enforcement thereof, would contribute a great deal toward improving the present conditions. This cannot be accomplished in a day, but if a well-directed campaign is carried on year after year, definite results can be expected. The average veterinarian does not wish to be a chronic violator of the Code of Ethics, but much of this violation is due to ignorance of the Code on the one hand, and the feeling that nothing will be said or done by the profession on the other hand.

The deans of veterinary schools should be advised of the importance of impressing upon their students the field and scope of the ethics of the profession. This procedure should begin with the freshman class and be carried through to graduation. An adequate supply of reprints of the Code of Ethics should be furnished the schools by the executive office.

The 1946 report, the first for this committee, placed a working program before the Association. It was accepted by the House of Representatives and, during the 1946-47 season, the Committee has attempted to carry it to a conclusion.

We began by sending out a questionnaire to the component associations asking that each have its organization place our 1946 report before the membership. In addition, we asked if they used the AVMA Code of Ethics or one of their own. In the case of the latter, we requested a copy, so that a comparison with the national and other state codes could be made. The date on which the report was presented to the membership was requested also.

The 1946 report requested that the AVMA do its part in making this a national action by having the executive office send out a letter or publish a letter in the JOURNAL, to the effect that each member would be responsible for engaging in any unethical advertising and that action would be taken by the state and national organizations, one year from the date of publication of the letter.

Our committee decided that, from the returns received from the state organizations, July, 1947, would be the time when all the component organizations would have completed notification of their memberships, in the manner they chose best, and asked the AVMA to publish its letter that month.

A little less than 50 per cent of the associations which responded to the questionnaire use the Code of Ethics of the AVMA. The remaining state organizations use codes which have been adopted at times ranging from 1900 to as late as 1942. In looking over the various codes returned, the Committee finds none that excel the AVMA Code, and in most instances there is a decided lack of information.

In the majority of instances, it appears that the state codes were copies from one another, for many of them read identically. This wording is traceable back to as early as 1882 in the case of a code from a local veterinary medical association. Very little effort apparently has been made to improve the ethical standards of advertising for veterinarians by state organizations for a period of about forty-seven years, if the codes are to be taken as a criterion.

If the component associations of the AVMA and the AVMA itself lived up to the codes they have set up for their members, there would be little or no advertising in the telephone directories.

However, with the exception of the AVMA Code, most of the states fail to specify what constitutes a directory advertisement.

The Committee recommends, inasmuch as the AVMA Code excels all submitted codes, that it would be well for those component organizations which do not already use the national Code to consider its adoption. This would unite the veterinary profession in its ethical endeavors.

The Committee recommends the adoption of this report and the continuation of the Committee.

s/S. W. HAIGLER, Chairman
R. A. MERRILL RAYMOND C. SNYDER

Joint Committee on Foods—AVMA and AAHA

The Committee has met only once since the last report was made to the coöperating associations. This meeting was held in Washington, March 28, 1947, and served as the postponed annual meeting since it proved impossible for the Committee to convene during the AVMA session in Boston last August.

The two dog foods, "Gro-Pup" and "Friskies", which continued under supervision during the war and bear the temporary statement of acceptance, are now undergoing the tests specified in the revised program (*see* the JOURNAL, Nov., 1945, pp. 371-373) to determine if they will qualify for the regular Seal of Approval. These tests place major emphasis on biological assays including a protein evaluation test and actual feeding tests on dogs under controlled conditions to determine the nutritional adequacy of tested foods either as "maintenance" or "complete" rations. With such criteria, an unusually high standard, both as to quality and proportion of essential ingredients, is required for a food to qualify for the Seal.

During the past year, the Committee has received inquiries from 22 manufacturers of dog foods relative to the requirements for obtaining the Seal of Approval for their products; all have been furnished with detailed information on the program and the necessary tests. Many of these manufacturers have anticipated the return of canned dog foods to the market, which is now taking place in increasing numbers. This development will be of interest and concern to small animal practitioners and dog owners, depending on the varying degrees of quality of these commercial dog foods. It will be recalled that, in a survey made by the Committee in 1941, nutritional diseases were rated first in frequency of occurrence by veterinary practitioners.

GOVERNMENT CERTIFICATION OF CANNED ANIMAL FOODS

In a press release dated Nov. 15, 1946, the U. S. Department of Agriculture announced a permissive federal inspection for "canned foods prepared for dogs, cats, and other meat-eating animals . . . when packers request and pay for this service." The announcement also said that the inspection would include supervision over sanitary conditions in the plant, the ingredients that go into the can, accurate labeling, and other steps of preparation.

The release also stated that the inspection service would apply to "canned wet foods for dogs, cats, and other carnivora, as distinguished from dry foods such as dog biscuits;" also that, to obtain government certification, the canned product must be "a normal maintenance ration, containing at least 10 per cent protein, 0.3 per cent of calcium and phosphorus, respectively, and 0.15 mg. of thiamin, an essential vitamin, per pound. At least 30 per cent of the product must be meat or meat byproduct. Vegetables, grains, or substances derived from them must be of good quality, sound and clean."

The announcement further stated that the Department's action in providing the inspection service was "based on a request and subsequent discussions by members of the American Meat Institute in behalf of canners of animal foods." Also, "As evidence of U. S. approval, products that meet all official requirements are to be marked with an inspection and certification stamp in the form of a keystone, a design prepared especially for the purpose." The inspection service is administered by the Bureau of Animal Industry through the Animal Foods Inspection Division.

CONFERENCE ON GOVERNMENT PROGRAM

Since the Joint Committee had no knowledge of the government program prior to the press release, it seemed desirable to obtain first hand information about it, particularly with respect to its possible effect on continuance or discontinuance of the program carried on by the AAHA from 1934 to 1941 and jointly by the AVMA-AAHA since 1941. Accordingly, arrangements were made with Bureau Chief B. T. Simms for Dr. L. V. Hardy, in charge of the Animal Foods Inspection Division, to meet with the Committee on March 28.

A full discussion of the government program took place and Dr. Hardy furnished the Committee with printed copies of the government rules and regulations as published in the *Federal Register* for Nov. 20, 1946, as "Title 9—Animals and Animal Products; Chapter 1—Bureau of Animal Industry; Subchapter G—Inspection of Animal Foods; Part 155—Canned Wet Normal Maintenance Food for Dogs, Cats, and Other Carnivora."

The inspection and certification program as announced was authorized under provisions of the Agricultural Marketing Act of 1946 contained in Title II of Pub. Law 733, 79th Congress, 2nd Session, which authorizes the Secretary of Agriculture "To inspect, certify, and identify the class quality, quantity, and condition of agricultural products when shipped or received in interstate commerce, under such rules and regulations as the Secretary of Agriculture may prescribe, including assessment and collection of such fees as will be reasonable and as nearly as may be to cover the cost of the service rendered***."

The parts of the regulations as issued by the USDA which are of special interest at this time include the following definitions and requirements:

"Meat" is defined as meaning the U. S. inspected and passed and so identified clean, wholesome muscle tissue of cattle, sheep, swine, or goats which is skeletal or which is found in the tongue, in the diaphragm, in the heart, or in the esophagus with or without the accompanying and overlying fat and the portions of skin, sinew, nerve, and blood vessels which normally accompany the muscle tissue and which are not separated from it in the process of dressing. It does not include the muscle found in the lips, snout, or ears.

"Meat by-product" is defined as meaning the U. S. inspected and passed and so identified clean, wholesome part other than meat which has been derived from one or more cattle, sheep, swine, or goats.

"Horse meat" is defined as meaning the U. S. inspected and passed and so identified clean, wholesome muscle tissue of horses which is skeletal and as otherwise defined under *"meat"* above.

"Horse-meat by-product" is defined as meaning the U. S. inspected and passed and so identified clean, wholesome part other than horse meat, which has been derived from horses.

Charges for Premise Survey and for Service.—Applicants for the inspection and certification program are required to reimburse the USDA for salary, travel cost, *per diem* allowance, and the like incidental to any survey of the premises to determine if they meet the department's sanitation and facilities requirements. Also, for each hour of inspection service extended to an inspected plant, a fee of not less than $2.50 shall be charged to the applicant and paid to the department.

Composition of Certified Product.—The regulations state that:

a) Only ingredients which are "normal" to canned wet food for dogs, cats, and other carnivora, or are favorable to adequate nutrition, and which are classed by the chief of the division as conforming with requirements, shall be used in the preparation of certified product.

b) Not less than 30 per cent of meat and/or meat by-product or of horse meat and/or horsemeat by-product shall be used in the preparation of canned certified product.

c) Vegetables and grains and/or their derivatives used as ingredients of a certified product shall be of good quality, free from discoloration, mold, smut, insect infestation, and shall be otherwise sound and clean.

d) Certified product shall contain not less than 10 per cent of protein.

e) Certified product shall contain not less than 0.15 mg. of vitamin B-1 (thiamin) in each pound of finished product.

f) Certified product shall contain not less than 0.3 per cent of calcium and phosphorus, respectively, added in the form of edible ground bone or other compound of calcium and phosphorus which is approved by the chief of the division.

g) Inedible material such as tankage, dried blood, bone meal, and the like shall not be used.

Ingredient Statement.—It is required that the complete list of ingredients shall appear conspicuously on the label with the name of the product and shall show the common or usual names of the ingredients arranged in the order of their predominance.

Statement of Certification.—The approved legend for certified products which will appear on the keystone stamp especially designed for the purpose reads as follows: "Inspected and Certified by U. S. Department of Agriculture as a normal maintenance ———— (dog, cat, fox, etc.) food."

In the discussion with Dr. Hardy, it was ascertained that the standards for a "normal maintenance food" for dogs, cats, and other carnivora were developed from data on the nutritional requirements of those animals obtained from published and unpublished studies carried on in institutional, industrial, and other research laboratories.

It was also ascertained that, for the present at least, no actual biological tests are planned to check the nutritional qualities of the canned foods to be certified by the USDA. Instead, the Department will depend upon calculations of nutritional adequacy based upon the ingredient formulas supplied by the respective manufacturers for their foods. However, the department will conduct routine chemical analyses on certified products.

Other regulations pertain to plant sanitation requirements, facilities for the inspection service, inspection procedures, label requirements, penalties, reports, etc.

DUPLICATION OF GOVERNMENT AND JOINT COMMITTEE PROGRAMS

From the foregoing brief description of the government-sponsored program, it is apparent that there is now a duplication in dog-food inspection activities which did not exist at the time the AVMA and AAHA joined forces to carry on their Seal of Approval work. The question immediately arises, therefore, as to whether the Joint Committee should recommend to the coöperating associations that their program be discontinued. It is obvious that the government program will gain a wide acceptance, almost at once, among practically all members of the meat-packing industry who manufacture dog foods, whereas, as a matter of fact, no member of the regular meat-packing industry ever did come under the supervision of the AVMA-AAHA program.

In the judgment of your Committee, it would be highly undesirable for a competitive situation to develop whereby there would be, on the one hand, a group of dog foods bearing government certification and, on the other, a group of foods bearing the Seal of Approval of the Joint Committee.

However, in the light of the experience gained by the Committee from its several years of research studies and actual testing of dog foods, it seems that the government program has certain serious defects which we would be negligent in not stating. These are:

1) Dependence upon "paper work" determinations of nutritional adequacy instead of providing for actual biological assays (feeding tests) of foods to be certified as "normal maintenance rations."

2) In the judgment of the Committee, the present government program is discriminatory in effect, although not in intent, in that it provides a certification system for wet canned dog foods manufactured by the meat-packing industry but not for dry dog foods produced by other manufacturers. It is understood that the Secretary of Agriculture can and will provide an inspection and certification program for dry dog foods if a proper request is received from the latter industry. In the meantime, it is already apparent that the U. S. approval of canned dog foods is to be highly exploited and that veterinarians and pet owners will be encouraged to believe that the certification carries positive guarantees of quality far beyond anything which the responsible officials originally had in mind when the program was developed.

ELECTION OF FIFTH MEMBER OF COMMITTEE

At the committee meeting on March 28, Dr. A. E. Wight was reëlected as a fifth member of the Committee for a term ending in 1950. Dr. Wight, who retired from the Bureau of Animal Industry in 1946, had been provisionally replaced by Dr. H. W. Schoening, but the Committee felt that his long experience on the Committee made it desirable for him to be continued, if possible.

ELECTION OF OFFICERS

Also at the meeting on March 28, the following officers were reëlected for the ensuing year: S. W.

Haigler, chairman; A. R. Theobald, treasurer; and J. G. Hardenbergh, secretary.

AUDIT OF COMMITTEE FUNDS

An official audit of the funds in the hands of the treasurer at the close of the fiscal year ending June 30, 1946, showed a cash balance of $4,185.03 and all bills paid.

s/S. W. HAIGLER, Chairman
L. A. CORWIN J. G. HARDENBERGH
J. B. ENGLE A. E. WIGHT

Subcommittee on Veterinary Items, National Formulary Committee

The National Formulary (1946, eighth edition), seventh revision, became official from April 1, 1947. The Committee was consulted from time to time during the revision on matters pertinent to veterinary medicine. As in the past, our advice and suggestions were given every consideration by the General Revision Committee.

Revisions of the National Formulary are no longer made decennially. The seventh edition (sixth revision) was published in 1942 and was official from April 1, 1943.

s/H. D. BERGMAN, Chairman
R. F. BOURNE P. W. BURNS
C. F. CAIRY

Humane Act Award

The Committee received 19 nominations this year, more than in any previous year. Some were from individual practitioners, others from humane societies.

The incidents covered in this year's nominations range from the capture of a furiously rabid dog to the care and nursing of a dog back to health by a boy, after the animal had been thrown out; the rescue of a newborn colt from a muddy quagmire; the rescue of a dog tied in a burlap bag and thrown into a river; the establishment of a miniature anti-cruelty society ministering to sick and injured animals; the rescue of six baby puppies from certain death; and various similar acts.

This year's winner by unanimous vote of the Committee is Suzanne Weller, 14-year-old schoolgirl of 1837 Fallowfield Ave., Pittsburgh, Pa. The original letter accompanying her nomination reads in part as follows:

> We have a very unusual rescue case showing courage and heroism.
>
> On Thursday, June 12, if not earlier, a black and white Fox Terrier developed a mood of attack and began to bite whatever came in his path. The entire community was thrown into panic. Seven radio police cars, four Animal Rescue League trucks, and the entire dog-catcher squad were on the hunt to make the capture through a period of more than twenty-four hours, but the dog evaded his pursuers and disappeared from sight.
>
> On Friday, 14-year-old Suzanne Weller, a student at Lee School, observed the dog trotting down the street near the school building. She succeeded in capturing it, clasping her hands over its jaws, carried it into the school building attempting to put it in the nature study room, when she was bitten and the dog escaped. She again caught him and placed him in an empty school room awaiting the arrival of the authorities. Records are not complete, but already we have the names of thirty-three school children, a school teacher and several other adults that were bitten by the dog. The Animal Rescue League has the dog in custody.
>
> The same evening of her experience, Suzanne played her violin at a school concert.

The pertinent facts concerning this case were substantiated by newspaper reports during the subsequent days.

On Saturday, Aug. 9, 1947, I ascertained that Suzanne was well and apparently safe from the dangers to which she was exposed in this rescue.

This courageous girl's act was more than just heroism, for it stopped a health menace to the people and animals of Pittsburgh. Your Committee is glad to honor Suzanne with the Association's fourth Humane Act Award which reads in part as follows:

> For her heroic services to both animal and mankind by capturing a rabid dog which had bitten many pupils at the Lee School in Pittsburgh in June, 1947. Her efforts prevented great anxiety to the citizens of Pittsburgh and undoubtedly much suffering and disease among the people and animals of this city.
>
> Presented at the 84th Annual convention of the American Veterinary Medical Association, Cincinnati, Ohio, August 18-21, 1947.

W. A. YOUNG, Chairman
J. A. CAMPBELL E. F. SCHROEDER

Inter-American Veterinary Congress

No meetings have been held during the past year, and no correspondence has been carried on since the last meeting. There is little prospect of holding such a Congress in the near future.

The Director General of the Pan American Sanitary Bureau has informed the executive secretary of the American Veterinary Medical Association that they will offer all the facilities of their organization to assist in the establishment of the first Pan American Veterinary Conference. Cables have been dispatched to South American veterinary associations and deans of veterinary colleges, requesting their support of the convention. At this time Peru, Brazil, Chile, and Cuba have replied, giving their enthusiastic support. It is felt that this meeting is necessary at this time to establish a hemispheric veterinary policy.

s/B. T. SIMMS

Twelfth International Veterinary Congress Prize

Dr. Wm. J. Butler, state veterinarian of Montana, has been selected as the recipient of the Twelfth International Veterinary Congress Prize.

Special Committee on Rabies

It will be recalled that in the report submitted to the Association last year by the Special Committee on Rabies, it was recommended that an effort be made to call a meeting of representatives of the various organizations which have an interest in the control of rabies, with a view to formulating a satisfactory program which could be agreed upon by the various groups. In line with this recommendation, your Committee undertook the calling of such a meeting in April of this year.

The chairman of the Committee extended invitations to the following organizations to send representatives to meet in conference, with members of the A.V.M.A. rabies committee, in Philadelphia, Pa., on Apr. 9, 1947:

Bureau of Animal Industry, U. S. D. A.
U. S. Public Health Service
American Public Health Association

American Medical Association
U. S. Livestock Sanitary Association
American Animal Hospital Association

On Apr. 8, 1947, the day before the conference, the Special Committee on Rabies met and developed agenda for the meeting to be held the following day.

All of the organizations invited sent one or more representatives and a very profitable and successful conference was held. The report of this conference, concurred in by the various representatives, is submitted herewith as an integral part of the report of the Special Committee on Rabies.

R. A. KELSER, Chairman
C. W. BOWER G. J. PHELPS
G. L. DUNLAP H. W. SCHOENING
C. A. MITCHELL A. ZEISSIG
C. P. ZEPP

CONFERENCE ON RABIES

Philadelphia, Pa., April 9, 1947

1) On invitation of Dr. R. A. Kelser, chairman, Special Committee on Rabies, American Veterinary Medical Association, the following individuals, representing the organizations indicated, met at the University of Pennsylvania, Philadelphia, Pa., on Apr. 9, 1947, for the purpose of discussing a rabies control program which could be agreed upon in principle by the various agencies represented:

Representing the American Public Health Association.—Dr. Haven Emerson, emeritus* professor of Public Health, Columbia University; chairman, Subcommittee on Control of Communicable Diseases, A.P.H.A.; member, Committee on Rabies, New York Academy of Medicine.

Representing the American Medical Association.—Dr. Stuart Mudd, professor of Bacteriology, University of Pennsylvania, Philadelphia, Pa.

Representing the U. S. Public Health Service.—Dr. Karl Habel, National Institute of Health, U. S. Public Health Service, Bethesda, Md.

Dr. James H. Steele, chief, Veterinary Public Health Section, U. S. Public Health Service, Bethesda, Md.

Dr. Ernest S. Tierkel, Rabies Research Project, U. S. Public Health Service, Montgomery, Ala.

Representing the Bureau of Animal Industry, U. S. Department of Agriculture.—Dr. H. W. Schoening, in charge, Pathological Division, Bureau of Animal Industry, U. S. Dept. of Agriculture, Washington, D. C.

Representing the U. S. Livestock Sanitary Association.—Dr. R. A. Hendershott, chief, Bureau of Animal Industry, Department of Agriculture, Trenton, N. J.

Dr. A. L. Brueckner, director, Livestock Sanitary Service, Maryland State Board of Agriculture, College Park, Md.

Representing the American Animal Hospital Association.—Dr. C. P. Zepp, Sr., veterinary practitioner, New York, N. Y.

Representing the American Veterinary Medical Association.—Dr. C. W. Bower, veterinary practitioner, past president, AVMA, Topeka, Kan.

Dr. Guy J. Phelps, veterinary practitioner, Montgomery, Ala.

Dr. Alex Zeissig, New York State Veterinary College, Cornell University, Ithaca, N. Y. (On leave with New York State Department of Health in connection with rabies control.)

Dr. R. A. Kelser, dean of faculty and professor of bacteriology, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pa.

2) Prior to this Conference, a meeting of the Special Committee on Rabies of the AVMA met and prepared a group of topics dealing with rabies and its control. These were suggested as a basis for the deliberations of the Conference. On motion by Dr. Emerson, duly seconded and voted, the Conference agreed to use these topics as a basis for discussion. It was further agreed that following the deliberations and conclusions of the Conference the chairman (Dr. Kelser), with such participants as he might designate, would edit the report of the Conference and submit it to each participant for his examination, comments, and approval or disapproval. It was also agreed that after this report had been circulated to the various participants of the Conference and approved by them, it would be submitted by the representatives to their organizations for consideration and action.

3) It was further agreed by the Conference that when the report was approved by the various individuals in attendance, it would be in order to publish the report in suitable journals. It is to be made clear, however, that the report, while having the approval of the various individual representatives, still must be acted upon by the organizations involved. This latter will require time.

4) Dr. Emerson called the Conference's attention to a report, now in press, from the Committee on Rabies, New York Academy of Medicine, and gave the Conference the benefit of the views and recommendations of that Committee as set forth in its report. There was also considered the report on "Rabies and Its Control" by a Subcommittee on Rabies, Committee on Animal Health, National Research Council.

5) The Conference unanimously agreed on the following principles and considerations in connection with such a rabies control program as might be undertaken on a national basis: (a) Rabies in the United States is of sufficient importance to make it desirable that the federal government participate in means for its control through coöperation with the several states, contributing funds and personnel. (b) Rabies in man is generally a disease reportable to local and state health authority. Rabies in lower animals should be specifically a reportable disease to be reported to public health or other responsible state health authority. It should be reported by states, with place of occurrence specified. Through a central federal agency, the consolidated information should be assembled, analyzed, and distributed to all states, agencies, and individuals having responsibility in a rabies control program. (c) In a program for the control of rabies in the United States, prime consideration must be given to (1) adequate diagnostic facilities, (2) the control of animals capable of transmitting the disease, and (3) mass immunization of susceptible animals, particularly dogs.

Diagnostic Facilities.—To be considered adequate, facilities for the diagnosis of rabies should include not only provision for the microscopic examination of brain specimens from suspected animals but also means for the inoculation of laboratory test animals. The number and location of laboratories performing services connected with the diagnosis of rabies should be adequate to provide prompt service within reasonable distances. Further, facilities should be provided for maintenance of suspected cases of rabies in lower animals under proper veterinary observation.

Control of Animals (Dogs, Cats, and Wildlife) Capable of Transmitting Rabies.—Control measures should include the following:

(*a*) Licensing of all dogs.

(*b*) Proper disposition of ownerless, unwanted, and stray domestic animal pets.

(*c*) As soon as rabies appears in a community, strict control of all dogs should be enforced for whatever period of time may be considered necessary. Dogs should not be permitted to run at large but should be properly confined on their owner's premises and only be permitted away from same when under proper restraint by a responsible individual.

(*d*) Dogs which have bitten persons or other animals, and dogs which are suspected of having rabies, should be confined in a suitable, authorized

place under veterinary supervision for a period of not less than fourteen days.

(*e*) Dogs known to have been exposed to rabies should be destroyed or kept confined for a period of not less than six months.

(*f*) Dogs under 6 months of age, being particularly susceptible and less satisfactorily immunized than older animals, should be confined until the area is certified as officially free of rabies.

(*g*) Adequate provisions and facilities for enforcing all regulations and requirements connected with the control program should be provided for.

(*h*) The control program should be continued for a period of at least ninety days subsequent to the last reported case of the disease.

(*i*) Should rabies be found to exist in wildlife, prompt arrangement should be made for active coöperation with the U. S. Fish and Wild Life Service and the analogous agency of the state involved. In this connection, when rabies has become established in wild species a program for reducing the number of individuals of affected species should be instituted and continued until the disease disappears. Routine brain examinations should be made to determine the incidence of the disease in the wild species and when it has abated.

Mass Immunization.—The vaccination of dogs, combined with other control measures as indicated herein, provides the most satisfactory method for the prompt control of rabies. Vaccinated dogs, when properly tagged, may be allowed at large thirty days after vaccination. Vaccination should consist of at least one injection of an immunizing dose of an accepted canine rabies vaccine. Evidence indicates that a single 5-cc. subcutaneous injection of an approved vaccine is effective in a mass vaccination program. However, the injection of three doses of vaccine in 5-cc. amounts, a week apart, provides greater immunization and should be advised when practical. For permanently reducing the number of susceptible dogs, it should be suggested that dog owners have their dogs immunized annually.

6) In any rabies control program, it is deemed essential that a local (county or municipal) rabies advisory committee be organized to facilitate operational functions and coöperative effort. Further, the Conference agrees that an educational program should be launched by appropriate authorization, representing federal, state, and local agencies, to explain the necessity of control measures, including the efficacy of the rabies vaccines now approved by the U. S. Bureau of Animal Industry and the National Institute of Health. The object of such an educational campaign is to acquaint the public and owners of dogs and other pet animals with pertinent facts concerning rabies and the reasons and importance of the measures taken for the control and eradication of the malady and the value of specific immunization against rabies. The advisability and desirability of utilizing vaccination not only for the control of the disease during an outbreak, but also in building up and maintaining a relatively highly immune dog population through the annual vaccination of dogs with rabies vaccine should be pointed out.

7) In view of the essential existing responsibility of the Bureau of Animal Industry of the U. S. Department of Agriculture, the U. S. Public Health Service, and the U. S. Fish and Wild Life Service, this Conference recommends that the function of coördinating a campaign for the control of rabies on a national scale be vested jointly in these three agencies. A plan for accomplishing this on a coöperative basis can undoubtedly be worked out through consultation of representatives of the agencies involved.

8) The principles and recommendations on which this Conference has agreed should be considered in a rabies control program on a national scale. In general, they are in accord with the procedures recommended by the Subcommittee on Rabies, Committee on Animal Health, National Research Council[1] and the report (now in press) of the Rabies Committee of the New York Academy of Medicine. There are other reports on rabies and its control by various other agencies and omission of reference to them does not mean that the conclusion of this Conference is or is not in general agreement with them. The report of the Subcommittee on Rabies of the National Research Council and that of the Rabies Committee of the N. Y. Academy of Medicine happened to be readily available during discussions of the Conference.

C. W. BOWER — STUART MUDD
A. L. BRUECKNER — GUY J. PHELPS
HAVEN EMERSON — H. W. SCHOENING
KARL HABEL — JAMES H. STEELE
R. A. HENDERSHOTT — E. S. TIERKEL
R. A. KELSER — ALEX ZEISSIG
C. P. ZEPP, SR.

[1]National Research Council: Reprint and Circular Series, No. 126, May, 1946.

Representatives

Representative to the Horse and Mule Association of America

The Horse and Mule Association of America, Inc. is a national, educational organization to aid and encourage the breeding and rearing and the use of horses and mules.

This association held its twenty-seventh annual meeting at the Palmer House in Chicago on Dec. 4, 1946.

The work of this organization has continued throughout the year along the same lines as in the past. Key men have been reached in counties all over the United States, county agricultural agents, teachers of vocational agriculture, stallion and jack owners, and breeders of purebred horses. There is now a mailing list of about 30,000 breeders of purebred horses.

The association has diligently endeavored to drive home the fact that war conditions are of short duration. There has never been a great war but what a slump has followed, both in prices of farm commodities and in wages for labor. Due to the shortage of farm labor, many have been forced to use tractors and abandon horses, and the draft horse has declined in price. At the present time, work horses are selling below the cost of production. There is still a good demand for work mules in some parts of the country.

There are about 8.5 million horses and 3.3 million mules on farms. We have about 12 million horses in what we call the nonagricultural field, on farms and not on farms.

Things do not look so good for the work horse at the present time, but the pleasure horse business has been booming. There has never been anything like it in all history. The breeders of Thoroughbreds have been receiving some very high prices, yearling prospects bringing up to $10,000. The trotting and pacing horse field has been very good and the sales prices the highest that have ever been known. In addition to that, there is a strong market for

strictly pleasure horses used for riding. The demand for riding horses has increased every year. Saddle clubs continue to spring up all over the country. People who use pleasure horses are willing to pay good prices for them, whether in racing, in the show field, or merely riding for pleasure.

Many horse shows are already booked for the season, a great many of these being benefit shows to assist some worthy cause.

Listing in the "Breeders' Gazette" of March, 1947, the different livestock registry associations, there are more breeds of horses listed than any other animals. Many new registry associations have started. Included among these are: the American Albino Horse; the Appaloosa Horse Club; the Palomino; the Morocco Spotted Horse; the Tennessee Walking Horse; the American Cream Horse; the Pinto Horse Society; the American Quarter Horse; along with the draft horse and the other old registry associations.

Many veterinarians are still enjoying good equine practice in the larger horse-breeding centers.

The Horse and Mule Association is bending every effort to keep the public horse-minded and interested in horses. The AVMA should continue their support.

s/T. A. SIGLER

Representative to American Association for the Advancement of Science

The 113th meeting of the A. A. A. S. was held in Boston, Dec. 26-31, 1946. A century ago, Sept. 24, 1847, the Association of American Geologists and Naturalists, meeting in Boston, passed a resolution transforming itself into the American Association for the Promotion of Science. The following year, the name was modified to the American Association for the Advancement of Science.

As the affiliated societies have grown in membership, several that originally met with the A. A. A. S. have chosen to meet independently to avoid difficulties imposed by hotel limitations. Unfortunately, the advantage of meeting separately is offset to some degree by the disadvantage of isolation. One of the major aims of the Association is to facilitate coöperation among scientists. The A. A. A. S. maintains an active interest in the major fields of science through its sections (we are affiliated with Section N, medical sciences), and its annual meeting is now the only place where integrating programs can be developed.

Officers for the year, 1947, include: Harlow Shapley, Harvard University, president; E. W. Sinnott, Yale University, president-elect; and E. V. Cowdrey, Harvard University, vice-president, medical sciences (N).

s/WARD GILTNER

Representative to Association of Honorary Consultants, Army Medical Library

On Jan. 27, 1947, the Association was incorporated under the laws of the District of Columbia. It will continue in its present capacity as an advisory body to the Surgeon General in matters pertaining to the Army Medical Library.

It will be recalled that the Association is an outgrowth of an advisory board of outstanding physicians and librarians appointed originally in 1931 by then Surgeon General Patterson. In 1943, Surgeon General Kirk appointed additional consultants and, in 1944, the Association first met as a group. The number has steadily grown and today there are over 85 members; the veterinary representatives include the undersigned and Dean R. A. Kelser, former director of the Veterinary Division, Surgeon General's Office.

Since the last report, Col. Joseph H. McNinch, M. C., has been designated to succeed Col. Leon L. Gardner, M.C., as Commandant of the Army Medical Library. Col. Harold W. Jones, M.C., former commandant of the Library and now retired, serves as secretary-treasurer of the Association of Honorary Consultants with a permanent office in the Library of Congress.

Your representative again invites attention to the services which the Army Medical Library offers to all persons in the medical field. These include reference and bibliographic, research, microfilm, and other types of library help which cannot be equalled elsewhere. If veterinary investigators will avail themselves of the library's services, it will help to demonstrate the usefulness and need for this development in the veterinary field and will promote the interest of the library's officials in the veterinary aspects of its work. Individual and collective interest and support of the institution's program must be shown by the veterinary profession if the potential value of this center of medical library work to our field is to be realized.

s/J. G. HARDENBERGH

Representative to the Fourth International Congress on Tropical Medicine

The various organizations sponsoring these congresses are the Bureau of Medicine and Surgery, Department of Agriculture, the Office of Surgeon General, U. S. Army, U. S. Public Health Service, the Veterans Administratiton, the American Academy of Tropical Medicine, the American Association for the Advancement of Science, American Association of Economic Entomologists, American College of Physicians, American Dermatological Association, American Medical Association, American Public Health Association, American Society of Parasitologists, American Society of Tropical Medicine, the American Veterinary Medical Association, the Entomological Society of America, Medical Society of the District of Columbia, the National Malaria Society, the National Research Council, and the Southern Medical Association.

A movement was undertaken to organize and bring to the United States the Fourth International Congress on Tropical Medicine. This was taken up by the State Department. Representatives of various organizations met informally in Washington, at the State Department, to consider the possibility of such a congress.

After the usual formalities, it was decided that such a congress should be held and that, further, it should include on a congress level, also, malaria. So there has now been organized a committee of the Fourth International Congresses on Tropical Medicine and Malaria.

The chairman of this organizing committee is Dr. Thomas Parran, Surgeon General of the U. S. Public Health Service. The vice-chairman is Dr. George K. Strode, director, International Health Division of the Rockefeller Foundation, and a member of the group, Charles L. Willard, representing the State Department. He is assistant chief of the Division of International Conferences. The program director is Dr. Rollie E. Dyer, director of the National Institute of Health. The executive secretary is Dr. Wilbur A. Sawyer, late of the Rockefeller Foundation.

The Congress will be divided into a number of sections: research and teaching, tropical, climatology and physiology; bacterial spiro-

chetal disease; virus and rickettsial disease, malaria, protozoan diseases, nutritional diseases of the tropics, tropical dermatology and mycology, tropical veterinary medicine, public health and medical and veterinary entomology.

Your representative was asked to serve as the convener for the section on tropical veterinary medicine, and Dr. Fred C. Bishop of the Bureau of Entomology and Plant Quarantine of the U. S. Department of Agriculture to serve as convener of the section on medical and veterinary entomology. Those are the two sections in which our organization will be interested.

The Congress will be held in Washington during the period of May 10 to 18, 1948. I have come in contact with various organizations throughout the world, and to date we have received a number of acceptances to participate in the veterinary section. It is planned that we will have from 12 to 15 veterinary papers in that section, and that the time will go over at least a day and possibly part of another date. It should be interesting to all veterinarians who can find it possible to attend.

The outlook is good. The budget is being handled by Mr. Basil O'Conner who, as you know, heads up the American Red Cross and is also chairman of the National Infantile Paralysis Foundation. It looks as if it will be well financed and it should be well attended.

Representative to the Inter-Association Council on Animal Disease and Production

Some members of the Council met on Nov. 29, 1946, but your representative was unable to attend. No official report of this meeting has been issued, but it is evident that the Council is inactive during this period of realignment of the various agencies represented. It is suggested that representation on the Council be maintained during this period of inactivity in order that action may be taken promptly when the need for action arises.

s/R. C. KLUSSENDORF

Representative to the International Veterinary Congress

An informal meeting was held in Washington, D. C., April 5, 1947, to discuss the date and meeting place of the next International Veterinary Congress. Those present were Sir Daniel Cabot of England, Dr. P. J. Du Toit of the Union of South Africa, Dr. G. Fluckiger of Switzerland, Dr. Charles A. Mitchell of Canada, and Dr. J. R. Mohler, vice-president of the permanent committee, Dr. H. W. Schoening, and Dr. B. T. Simms of the United States.

It was decided to recommend to the permanent committee that the next meeting be held in 1949, and that no recommendation concerning place of meeting should be made.

We have been advised informally that the permanent committee has voted to meet in London in 1949.

s/B. T. SIMMS

Representative to the National Live Stock Loss Prevention Board

I have the honor to submit a report of the last annual meeting of the National Live Stock Loss Prevention Board, held in Chicago on Feb. 11, 1947. That Board is composed of 41 associations and companies who, during the year, contributed $16,775 in support of its objectives. This amount is approximately 45 per cent more than for the previous year.

The meeting was called to order by the chairman, Dr. W. A. Young, who made a splendid report on the progress made. The secretary's report was read by Dr. H. Preston Hoskins. The financial report by the treasurer, Mr. C. H. McNie, showed a balance of $9,441.20.

General Manager, Prof. H. R. Smith, integrated papers which had been previously submitted by the regional managers, Messrs. Boyts, Cuff, and Peck, on "Sheep Parasites," "Grubs, Flies, and Lice," and "Railway Transportation Losses," respectively.

(Your representative contributed a statement on "Work in Livestock Loss Prevention" with particular references to recent surveys which showed a reduction of poultry tuberculosis ranging upward to 75 per cent and swine retentions on account of tuberculosis approximately 50 per cent, which had occurred in some sections of the cornbelt in the last ten years. The method of "backtracking" on tuberculous animals from slaughtering plants to the farms of origin was also discussed.

Other speakers offered information on how losses occurred and what might be done to prevent them. The president of the American Humane Association, Mr. Robert F. Sellar, Albany, N. Y., spoke about the attitude of his group toward the general objectives.

While many projects comprise the activities of this group, one of the principal efforts is in reducing waste of meat in the marketing of livestock. A pamphlet of considerable volume, showing what has been done and what may be done in that direction, has been prepared and given wide dissemination by the Board. A copy of this pamphlet is in the office of the AVMA.

One significant statement in the pamphlet is as follows: "The estimated waste of meat on deads and cripples at all markets during the year 1946 was 19,270,000 pounds, worth approximately $4,300,000 at wholesale prices. The total waste of meat from bruising is much larger than on deads and cripples. Based on a limited number of bruise tests in 1946, the waste of meat on dead, crippled, and bruised livestock tary loss in excess of $12,000,000."

Another statement, for which the members of the veterinary profession are entitled to much credit, is as follows: "Losses on cattle carcasses condemned for tuberculosis have been reduced 98% since 1917."

Other statements in the pamphlet call attention to losses from a variety of causes and suggest how these may be reduced.

It is recommended that the AVMA employ such means as are at its disposal in calling attention to preventable livestock losses. In this way, the participation of the AVMA in the objectives of the Board will be greatly increased.

s/J. A. BARGER

Representative to the Division of Biology and Agriculture of the National Research Council

The Association's representative to the National Research Council, National Academy of Sciences, attended the annual meeting of the Division of Biology and Agriculture held in Washington, D. C., on April 12, 1947. At this meeting, Dr. D. W. Bronk outlined the scope and functions of the National Research Council, stressing the many ramifications and services possible for this organization to perform in the furtherance of scientists in their own work and in making their researches more useful. The newly organized American Institute of Biological Sciences was outlined by Dr. H. B. Stein-

bach. In this report, the importance of all constituent societies and associations becoming affiliated with the Institute was stressed.

Two additional conferences in connection with the recently initiated program for obtaining information on morbidity and mortality caused by animal diseases were attended. One was held in Washington, D. C., on Oct. 18, 1946, and the other was held in Chicago on Dec. 6, 1946, at the request of the chairman of the Committee on Transmissible Diseases of the U. S. Live Stock Sanitary Association. This program, initiated by the National Research Council, is extremely important and should be expanded as soon as qualified personnel become available.

s/E. P. JOHNSON

Representative to the National Research Council—Division of Medical Sciences

Your representative to this division was unable to attend the meeting on May 3, 1947, and unfortunately neither of the alternates suggested was able to attend. Therefore, it will not be possible to make a report at this time.

s/W. H. FELDMAN

Representative to National Society for Medical Research

This society, which was organized early in 1946 for the purpose of organizing and carrying on a positive program to inform the public regarding the necessity for, and accomplishments of, medical and surgical research on animals, has had a busy and fruitful year. The membership of the Society now consists of 45 organizations, almost all of which are scientific groups; a start has been made at soliciting the membership of lay groups. To date, the American Red Cross and the U. S. Junior Chamber of Commerce have joined, while the Chamber of Commerce of the United States has passed a resolution in favor of animal experimentation and pledged its active support in any legislative actions.

Discussions have been initiated with officials of the American Humane Association, the Dog Writers' Association, and similar organizations in order to arrive at an intelligent appraisal and understanding of constructive humane activities as contrasted to unintelligent antivivisection agitation. The Society is also doing a most commendable piece of work in surveying and appraising the conduct of medical and surgical research on animals in medical schools and research institutions in order to bring about the best methods of animal care, housing, pre- and postoperative care, etc. In this work, recognition is being given to the desirability and necessity of having expert veterinary advice and supervision, either on a fulltime or parttime basis, depending on the size of the institution and the number of experimental animals it maintains.

During the past year, the Society has issued a number of bulletins and pamphlets presenting facts on the rôle of animal experimentation in relation to medical progress. This material and other aids are available to interested persons and agencies upon request to Mr. Ralph A. Rohweder, executive secretary of the Society, 25 East Washington St., Chicago 2, Ill.

The annual report of the Society was presented to the Association of American Medical Colleges, which sponsored the Society, at a meeting in Gulfport, Miss., in October, 1946. A meeting of the board of directors was held in Chicago, Feb. 9, 1947, and was attended by your representative; 21 members were present and, among other routine business, the present officers of the board were reëlected, namely, Dr. A. J. Carlson, University of Chicago, president; and Dr. A. C. Ivy, University of Illinois, secretary-treasurer.

The work of the Society is financed by contributions from medical schools, scientific societies, commercial concerns in the medical field, by personal gifts, etc. Up to Oct. 15, 1946, these contributions totaled $29,120.88 of which 36 four-year medical schools had given $9,541; three two-year schools had given $600; various scientific societies, $1,470; 14 commercial concerns, $5,950; while the Friends of Medical Research gave $11,357.60.

The budget of the Society for the current year is $23,000. On the basis of contributions from other scientific and professional organizations, it is recommended that the AVMA Committee on Budget include in its estimates for 1947-48 an item of $200 as our contribution to the work of the National Society for Medical Research.

s/J. G. HARDENBERGH

Representative to the United Nations Educational, Scientific, and Cultural Organization

On March 24 to 26 there was held in Philadelphia by the United Nations Educational, Scientific and Cultural Organization, a meeting of that organization, ordinarily referred to as UNESCO. I represented the AVMA, along with Dr. H. W. Schoening at that meeting.

The conference included some 500 technical and other organizations. The objectives, policies, and workings of the commission for UNESCO were formulated by about 100 members of the executive committee here in the United States, and the committeemen were apportioned through national organizations, federal, state, and other governments, and then a number at large.

The basic philosophy of the organization is the promotion of international understanding. The budget, however, of UNESCO for all of its far-flung activities in the 30 member countries involved is only $6 million, from which it would be apparent, of course, that voluntary contributions must be made by private organizations, whenever possible.

It was impossible to attend all of the sessions in which we may have had some interest, because many of them were running concurrently. As I have said, the purpose has been to set up this basic philosophy, which it is thought will bring together on a scientific level many of the countries that have been, of course, at least ahead of the war, somewhat apart.

There will be other meetings. A meeting was held in Denver, a Mountain Plains Regional Conference on UNESCO, on May 8 to 10. The AVMA was represented by Drs. I. E. Newsom and H. E. Kingman, Sr.

Representative to the U. S. Pharmacopeial Convention

There have been no meetings in connection with this activity, and the next Convention has been tentatively scheduled for 1950.

s/H. E. MOSKEY

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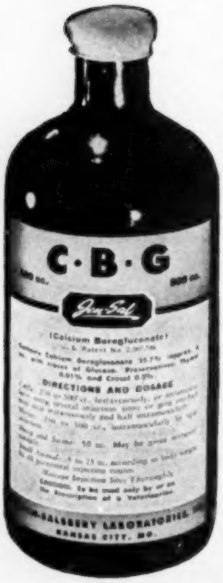

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